TOSHIBA M40X Series
User's Manual

Copyright

© 2005 by TOSHIBA Corporation. All rights reserved. Under copyright law, this manual cannot be reproduced in any form without the prior written permission of TOSHIBA. No patent liability is assumed, with respect to the use of the information contained herein.

TOSHIBA M40X Series Portable Personal Computer User's Manual

First edition March 2005

Ownership and copyright of music, video computer programs, databases, etc. are protected by the copyright laws. These copyrighted materials may be copied for private use at home only. If, beyond the limitation above, you copy (including to transform data formats) or modify these materials, transfer them or distribute them via the Internet without approval of copyright owners, you may be subject to claims for compensation for damage and/or criminal penalities due to infringements of copyrights or personal rights. Please remember to observe the copyright laws when you use this product to copy the copyrighted works or perform other actions. Please note that you may infringe the owner's rights protected by the copyright laws if you use the screen mode switching functions (e.g.Wide mode, Wide Zoom mode, etc.) of this product to display enlarged images/ video at coffee shops or hotels for the purposes of profits or providing these to the public.

Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for the TOSHIBA M40X series Portable Personal Computers at the time of this manual's production. However, succeeding computers and manuals are subject to change without notice. TOSHIBA assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the computer and the manual.

Trademarks

IBM is a registered trademark and IBM PC, OS/2, and PS/2 are trademarks of International Business Machines Corporation. Celeron, Intel, Intel SpeedStep, and Pentium are trademarks or registered trademarks of Intel Corporation.

MS-DOS, Microsoft, Windows and DirectX are registered trademarks of Microsoft Corporation.

Centronics is a registered trademark of Centronics Data Computer Corporation. Photo CD is a trademark of Eastman Kodak.

Bluetooth is a trademark owned by its proprietor and used by TOSHIBA under license.

iLINK is a trademark of Sony Corporation.

Other trademarks and registered trademarks not listed above may be used in this manual.

TruSurround XT, TruBass, Dialog Clarity, SRS (●) and symbol are trademarks of SRS Labs, Inc.

TruSurround XT technology is in corporated under license from SRS Labs, Inc.

Macrovision License of Notice

This product incorporates copyright protection technology that is protected by methods and claims of certain U.S. patents and other intellectual rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only unless authorized by Macrovision Corporation. Reverse engineering of disassembly is prohibited.

Safety Instructions

Use the following safety guidelines to help protect yourself and your computer.

When Using Your Computer

Do not operate your portable computer for an extended period of time with the base resting directly on your body. With extended operation, heat can potentially build up in the base. Allowing sustained contact with the skin could cause discomfort or, eventually, a burn.

- Do not attempt to service the computer yourself. Always flow installation instructions closely.
- Do not carry a battery in your pocket, purse, or other container where metal objects (such as car keys) could short-circuit the battery terminals. The resulting excessive current follow can cause extremely high temperatures and may result in damage from burns.
- Be sure that noting rests on your AC adapter's power cable and that the cable is not located where it can be tripped over or stepped on.
- Place the AC adapter in a ventilated area, such as a desk top or on the floor, when you use it to run the computer or to charge the battery. Do not cover the AC adapter with papers or other items that will reduce cooling; also, do not use the AC adapter while it is inside a carrying case.
- Use only the AC adapter and batteries that are approved for use with this computer. Use of another type of battery or AC adapter may risk fire or explosion.

- Before you connect the computer to a power source, ensure that the voltage rating of the AC adapter matches that of the available power source.

  115 V/60Hz in most of North and south America and some Far Eastern countries such as Taiwan.

  100 V/50Hz in eastern Japan and 100 V/60Hz in western Japan.

  230 V/50 Hz in most of Europe, the Middle East, and the Far East.
- If you use an extension cable with your AC adapter, ensure that the total ampere rating of the products plugged in to the extension cable does not exceed the ampere rating of the extension cable.
- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm.
- When setting up the computer for work, place it on a level surface.
- Do not dispose of batteries in a fire. They may explode. Check with local authorities for disposal instructions.
- When traveling, do not check the computer as baggage. You can put your computer through an X-ray security machine, but never put your computer through a metal detector. If you have the computer checked by hand, be sure to have a charged battery available in case you are asked to turn on the computer.
- When traveling with the hard drive removed from the computer, wrap the drive in a non-conducting material, such as cloth or paper. If you have the drive checked by hand, be ready to install the drive in the computer. Your can put the hard drive through an X-ray security machine, but never, but the drive through a metal detector.
- When traveling, do not place the computer in overhead storage compartments where it could slide around. Do not drop your computer or subject it to other mechanical shocks.
- Protect your computer, battery, and hard drive from environmental hazards such as dirt, dust, food, liquids, temperature extremes, and overexposure to sunlight.
- When you move your computer between environments with very different temperature and/or humidity ranges, condensation may form on or within the computer. To avoid damaging the computer, allow sufficient time for the moisture to evaporate before using the computer.

When taking the computer from low-temperature conditions into a warmer environment or from high-temperature conditions into a cooler environments, allow the computer to acclimate to room temperature before turning or power.

- When you disconnect a cable, pull on its connector or on its strain relief loop, not on the cable itself. As you pull out the connector, keep it evenly aligned to avoid bending any connector pins. Also, before you connect a cable make sure both connectors are correctly oriented and aligned.

- Before you clean your computer, turn if off, unplug it from its power source, and remove the battery.
- Handle components with care. Hold a component such as a memory module by its edges, not its pins.

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not use this product near water, for example, near a bathtub, washing bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord indicated in this manual.
- Replace only with the same or equivalent type battery recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.
- To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

Use only the battery pack that came with the computer or an optional battery pack. Use of wrong battery could damage your computer. TOSHIBA assumes no liability for any damage in such case.

Only peripherals complying with the FCC class B limits may be attached to this equipment. Operation with non-compliant peripherals or peripherals not recommended by TOSHIBA is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's or expansion unit's external monitor port, parallel port, USB port and microphone jack. Changes or modifications made to this equipment, not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.

FCC information

Model Name: Toshiba M40X

FCC notice “Declaration of Conformity Information”

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Only peripherals complying with the FCC class B limits may be attached to this equipment. Operation with non-compliant peripherals or peripherals not recommended by TOSHIBA is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's or expansion unit's external monitor port, parallel port, USB port and microphone jack. Changes or modifications made to this equipment, not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.

EMC Regulatory Information

Contact

Address:	TOSHIBA America Information Systems, Inc. 9740 Irvine Boulevard Irvine, California 92618-1697
Telephone:	(949) 583-3000

EU Declaration of Conformity

TOSHIBA declares, that the product: Toshiba M40X conforms to the following Standards:

This product is labelled with the CE Mark in accordance with the related European Directives, notably Electromagnetic Compatibility Directive 89/ 336/EEC for the notebook and the electronic accessories including the supplied power adapter, the Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EEC in case of implemented telecommunication accessories and the Low Voltage Directive 73/23/EEC for the supplied power adapter.

CE Marking is the responsibility of TOSHIBA EUROPE GmbH, Hammfelddamm 8, 41460 Neuss, Germany, phone +49-(0)-2131-158-01.

For a copy of the related CE Declaration of Conformity please refer to the following website: http://epps.toshiba-teg.com.

Canadian Regulatory Information (Canada Only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of the Canadian Department of Communications.

Note that Canadian Department of Communications (DOC) regulations provide, that changes or modifications not expressly approved by TOSHIBA Corporation could void your authority to operate this equipment.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la class B respecte toutes les exgences du Règlement sur le matériel brouilleur du Canada.

Optical Disc Drive Safety Instruction

- *Be sure to check the international precautions at the end of this section.*

The optical drive that is used in this computer is equipped with laser. The classification label with the following sentence is affixed to the surface of the drive.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
APPAREIL A LASER DE CLASSE 1
KLASS 1 LASER APPARAT

The drive with the above label is certified by the manufacturer that the drive complies with the requirement for laser product on the date of manufacturing pursuant to article 21 of Code of Federal Regulations by the United States of America, Department of Health & Human Services, Food and Drug Administration.

In other countries, the drive is certified to comply with the requirement pursant to IEC 825 and EN60825 on class 1 laser product.

This computer is equipped with one of the optical drive in the following list according to the model

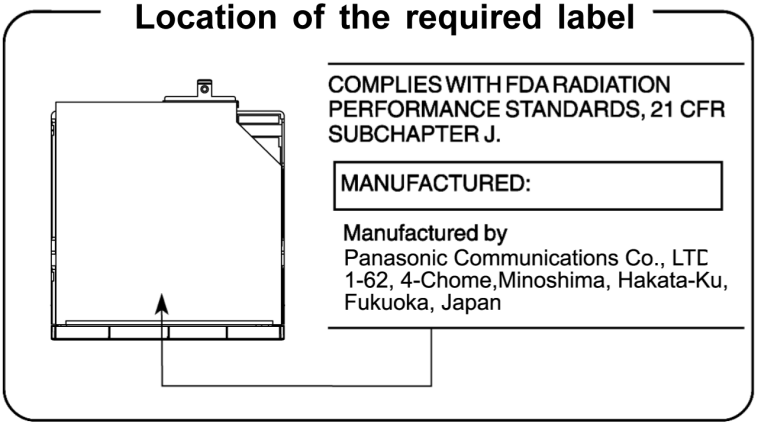
Manufacturer	Type
Panasonic Communications Co., LTD.	CD-RW/DVD-ROM UJDA760
TEAC	CD-RW/DVD-ROM DW-224E
TOSHIBA Samsung Storage Technology	CD-RW/DVD-ROM TS-L462A
Panasonic Communications Co., LTD.	DVD Super Multi UJ-840B
Panasonic Communications Co., LTD.	DVD Super Multi UJ-831B
Panasonic Communications Co., LTD.	DVD Super Multi UJ-830B
Hitachi-LG Data Storage, Inc.	DVD Super Multi GMA-4080N

International precautions

- *This drive employs a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.*
- *Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.*
- *To prevent direct exposure to the laser beam, do not try to open the enclosure.*

Location of the required label

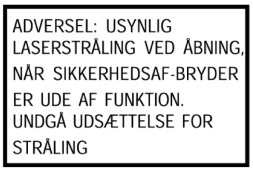
Sample shown below. Location of the label on the drive and manufacturing information may vary.



CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
TO EN 60825-1
クラス 1 レーザ 製品

CAUTION: This appliance contains a laser system and is classified as a “CLASS 1 LASER PRODUCT.” To use this model properly, read the instruction manual carefully and keep this manual for your future reference. In case of any trouble with this model, please contact your nearest “AUTHORIZED service station.” To prevent direct exposure to the laser beam, do not try to open the enclosure.

VORSICHT: Dieses Gerät enthält ein Laser-System und ist als “LASERSCHUTZKLASSE 1 PRODUKT” klassifiziert. Für den richtigen Gebrauch dieses Modells lesen Sie bitte die Bedienungsanleitung sorgfältig durch und bewahren diese bitte als Referenz auf. Falls Probleme mit diesem Modell auftreten, benachrichtigen Sie bitte die nächste “autorisierte Service-Vertretung”. Um einen direkten Kontakt mit dem Laserstrahl zu vermeiden darf das Gerät nicht geöffnet werden.



ADVARSEL: Denne mærking er anbragt udvendigt på apparatet og indikerer, at apparatet arbejder med laserstråler af klasse 1, hviket betyder, at der anvendes laserstrlier af svageste klasse, og at man ikke på apparatets yderside kan bilve udsat for utilladellg kraftig stråling.

APPARATET BOR KUN ÅBNES AF FAGFOLK MED SÆRLIGT KENDSKAB TIL APPARATER MED LASERSTRÅLER!

Indvendigt i apparatet er anbragt den her gengivne advarselsmækning, som advarer imod at foretage sådanne indgreb i apparatet, at man kan komme til at udsætte sig for laserstråling.

OBS! Apparaten innehåller laserkomponent som avger laserstråining överstigande gränsen för laserklass 1.

VAROITUS. Suojakoteloa si saa avata. Laite sisältää laserdiodin, joka lähetää näkymätöntä silmilie vaarallista lasersäteilyä.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED IN THE OWNER'S MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

VORSICHT: DIE VERWENDUNG VON ANDEREN STEURUNGEN ODER EINSTELLUNGEN ODER DAS DURCHFÜHREN VON ANDEREN VORGÄNGEN ALS IN DER BEDIENUNGSANLEITUNG BESCHRIEBEN KÖNNEN GEFÄHRLICHE STRAHLENEXPOSITIONEN ZUR FOLGE HABEN.

Modem warning notice

Conformity Statement

The equipment has been approved to [Commission Decision “CTR21”] for pan- European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries/regions the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Network Compatibility Statement

This product is designed to work with, and is compatible with the following networks. It has been tested to and found to confirm with the additional requirements conditional in EG 201 121.

Germany	ATAAB AN005,AN006,AN007,AN009,AN010 and DE03,04,05,08,09,12,14,17
Greece	ATAAB AN005,AN006 and GR01,02,03,04
Portugal	ATAAB AN001,005,006,007,011 and P03,04,08,10
Spain	ATAAB AN005,007,012, and ES01
Switzerland	ATAAB AN002
All other countries/regions	ATAAB AN003,004

Specific switch settings or software setup are required for each network, please refer to the relevant sections of the user guide for more details.

The hookflash (timed break register recall) function is subject to separate national type approvals. It has not been tested for conformity to national type regulations, and no guarantee of successful operation of that specific function on specific national networks can be given.

Important Notice

Copyrighted works including, but not limited to music, video, computer program, databases are protected by copyright laws. Unless specifically permitted under applicable copyright laws, you cannot copy, modify, assign, transmit or otherwise dispose of any copyrighted work with the consent of the owner of the copyright.

Please take notice that unauthorized copying, modification, assignment, transmission and disposition may be subject to claims for damages and penalties.

General Precautions

TOSHIBA computers are designed to optimize safety, minimize strain and withstand the rigors of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the general precautions below and to note the cautions included in the text of the manual.

Stress injury

Carefully read the *Instruction Manual for safety and comfort*. It contains information on prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use. Chapter 3, *Getting Started*, also includes information on work space design, posture and lighting that can help reduce physical stress.

Heat injury

- Avoid prolonged physical contact with the bottom of the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time (if you rest the computer on your lap, for example) your skin might suffer low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the I/O ports. It can become hot.
- The surface of the AC adapter can become hot when in use. This condition does not indicate a malfunction. If you need to transport the AC adapter, disconnect it and let it cool before moving it.
- Do not lay the AC adapter on a material that is sensitive to heat. The material could be damaged.

Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to strong impact.

Excessive pressure or impact can damage computer components or otherwise cause malfunctions.

PC Card overheating

Some PC Cards can become hot with prolonged use. Overheating of a PC Card can result in errors or instability in the PC Card operation. Also be careful when you remove a PC Card that has been used for a long time.

Mobile phone

Use of mobile phones can interfere with the audio system. Computer operation is not impaired but it is recommended that a distance of 30cm be maintained between the computer and a mobile phone in use.

LCD

Over a period of time, and depending on the usage of the computer, the brightness of the LCD screen will deteriorate. This is an intrinsic characteristic of LCD technology. Maximum brightness is only available when operating in AC power mode. Screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

Central Processing Unit ("CPU") Performance Disclaimer

CPU performance in your computer product may vary from specifications under the following conditions:

- use of certain external peripheral products
- use of battery power instead of AC power
- use of certain multimedia, computer generated graphics or video applications
- use of standard telephone lines or low speed network connections
- use of complex modeling software, such as high end computer aided design applications
- use of several applications or functionalities simultaneously
- use of computer in areas with low air pressure (high altitude > 1,000 meters or > 3,280 feet above sea level)
- use of computer at temperatures outside the range of 5 ºC to 30 ºC (41ºF to 86 ºF) or > 25 ºC (77 ºF) at high altitude (all temperature references are approximate and may vary depending on the specific computer model-please refer to your Resource Guide.)

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down.

This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions.

To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. For optimum performance, use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product Resource Guide. Contact Toshiba Technical Service and Support for more information.

Graphics Processing Unit ("GPU") Performance Disclaimer

The graphics processing unit ("GPU") performance may vary depending on product model, design configuration, applications, power management settings and features utilized.

GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

Main Memory Disclaimer

The graphics system in your computer may use part of the main system memory for graphics performance and therefore reduce the amount of system memory available for other computing activities. The amount of system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors.

Copy Protection

Copy protection technology included in certain media may prevent or limit recording or viewing of the media.

Hard Disk Drive Capacity

1 Gigabyte (GB) means 1000 x 1000 x 1000 = 1,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 1024 x 1024 x 1024 = 1,073,741,824 bytes, and therefore may show less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Windows® Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

Non-applicable Icons

Certain notebook chassis are designed to accommodate all possible configurations for an entire product series. Your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the notebook chassis, unless you have selected all those features.

Wireless LAN/Atheros

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations. The actual transmission speed will be lower than the theoretical maximum speed.

To use the Atheros SuperAG™ or SuperG™ function, your client and access point must support the corresponding feature. Performance of these functions may vary depending on the format of data transmitted.

SRS

SRS audio enhancements are available in the Microsoft Windows® operating system only.

Images

All images are simulated for purposes of illustration.

Express Media Player

The Express Media Player is not a Windows® based application. Battery life will be less than when using similar applications in the Windows Operating System.

LCD Brightness and Eye Strain

Your LCD display has a brightness approaching that of a TV device. We recommend that you adjust the brightness of your LCD to a comfortable level to prevent possible strain on your eyes.

CE compliance

This product and the original options are designed to observe the related EMC (Electromagnetic Compatibility) and safety standards. However, TOSHIBA cannot guarantee that this product still observes these EMC standards if options or cables not produced by TOSHIBA are connected or implemented. In this case the persons who have connected / implemented those options / cables have to provide assurance that the system (PC plus options / cables) still fulfils the required standards. To avoid general EMC problems, the following guidance should be noted:

- Only CE marked options should be connected / implemented
- Only best shielded cables should be connected

Working environment

This product was designed to fulfill the EMC (Electromagnetic Compatibility) requirements to be observed for so-called “Residential, commercial and light industry environments”.

TOSHIBA do not approve the use of this product in working environments other than the above mentioned “Residential, commercial and light industry environments”.

For example, the following environments are not approved:

- Industrial Environments (environments with a mains voltage >230V~)
- Medical Environments
- Automotive Environments
- Aircraft Environments

If this product is supplied with a network port, please refer to the paragraph “Network connection”.

Any consequences resulting from the use of this product in working environments that are not approved are not the responsibility of TOSHIBA Europe GmbH.

The consequences of the use of this product in non-approved working environments may be:

- Interference with other devices or machines in the near surrounding area
- Malfunction of, or data loss from, this product caused by disturbances generated by other devices or machines in the near surrounding area

Therefore TOSHIBA strongly recommend that the electromagnetic compatibility of this product should be suitably tested in all non-approved working environments before use. In the case of automobiles or aircraft, the manufacturer or airline respectively should be asked for permission before use of this product.

Furthermore, for general safety reasons, the use of this product in environments with explosive atmospheres is not permitted.

Network connection (Class A warning)

If this product has networking capabilities and will be connected to a network, Class A radiation limits will be observed (in accordance with technical conventions). This means that if the product will be used in a domestic environment, other devices in the near surrounding area may suffer interference. Consequently, please do not use this product in such environments (for example a living room), otherwise you could be held responsible for any ensuing interference.

Information on the secure writing of optical disc

Even if your software gives no indication that any problems have occurred, you should always check to ensure that information has been successfully stored on recordable optical disc (CD-R, CD-RW and so forth).

Wireless LAN and your Health

Wireless LAN products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by Wireless LAN devices however is far less than the electromagnetic energy emitted by other wireless devices such as mobile phones.

Because Wireless LAN products operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Wireless LAN is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Wireless LAN may be restricted by the proprietor of the building or responsible representatives of the organisation. These situations may for example include:

- Using the Wireless LAN equipment on board of aeroplanes
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organisation or environment (e.g. airports), you are encouraged to ask for authorisation to use the Wireless LAN device prior to turning on the equipment.

Safety Instruction for Wireless Products

If your computer has a wireless function, all safety instructions must be read carefully and must be fully understood, before you attempt to use it. This manual contains the safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries or could damage your Wireless Products.

Limitation of Liability

For damage occurring due to an earthquake or thunder, fire beyond our responsibility, action by third party, other accident, intentional or accidental mistakes by a user, misuse, use under abnormal conditions, we do not take any responsibility.

For incidental damage (loss of business profit, business interruption, etc.) occurring due to use or disability of the product, we do not take any responsibility.

For damage occurring due to non observance of the contents described in the instruction manual, we do not take any responsibility.

For damage occurring due to erroneous operation or hang up caused by use in combination with products not related to our company, we do not take any responsibility.

Usage Restrictions

Do not use the Wireless Products for controlling the following equipment:

- Equipment directly linked with human life corresponding to the following.
  - Medical equipment such as life support systems, equipment used in operations, etc.
  - Exhaust systems for gases such as poisonous gas etc. and exhaust systems for smoke.
  - Equipment that must be set up in compliance with various laws such as the Fire Services Act, the Construction Standard Act, etc.
  - Equipment corresponding to that mentioned above.
- Equipment linked with human safety or having a serious influence on the safe maintenance of public function, etc., because it is not designed or manufactured for this type of use.
  - Traffic control equipment for air, railroad, road, marine transport, etc.
  - Equipment used in atomic power plants etc.
  - Equipment corresponding to that mentioned above.

Warning

Turn OFF the Wireless Communication switch of Wireless Products in a congested place, such as a crowded commuter train.

Keep this product away from a cardiac pacemaker at least 22cm.

Radio waves can potentially affect cardiac pacemaker operation, thereby causing respiratory troubles.

Turn OFF the Wireless communication switch inside a medical facility or near medical electric equipment. Do not bring medical electric equipment close to the product.

Radio waves can potentially affect medical electric equipment, thereby causing an accident due to malfunction.

Turn OFF the Wireless communication switch near an automatic door, fire alarm or other automatic control equipment.

Radio waves can potentially affect automatic control equipment, thereby causing an accident due to malfunction.

Do not turn ON the Wireless Communication switch in aircraft or in places that generate or can generate radio interference.

Radio waves can potentially affect them, causing an accident due to malfunction.

Monitor possible radio interference or other troubles to other equipment while the product is used. If any effect is caused, turn OFF the Wireless Communication switch.

Otherwise, radio waves can potentially affect other equipment, thereby causing an accident due to malfunction.

When using the product in a car, check with the automobile dealer if the car has an adequate electromagnetic compatibility (EMC).

Radio waves of the product can potentially hamper safe driving.

Depending on car model, the product can rarely affect car electronic equipment if it is used in a car.

Note

Do not use this product in the following places:

Near a microwave oven or other environment which generates a magnetic field.

Near any place or equipment that generates static electricity or radio interference.

Depending on the environment, in a place where radio waves cannot reach the product.

Table of Contents

General Precautions

Wireless LAN and your Health xvi

Preface

Manual contents xxiii
Conventions. xxiv

Chapter 1 : Introduction

Equipment checklist 1-1
Features 1-3
Special features. 1-10
Utilities 1-12
Options. 1-15

Chapter 2 : The Grand Tour

Front with the display closed. 2-1
Left side 2-2
Right side. 2-2
Back side 2-4
Underside. 2-5
Front with the display open 2-6
System Status Indicators 2-8
Keyboard Indicators 2-9
Optical Disc drive 2-9

Chapter 3 : Getting Started

Setting up your work space 3-1
Connecting the AC adapter 3-5
Opening the display 3-6
Turning on the power 3-6
Starting up for the first time 3-7
Turning off the power 3-7
Restarting the computer. 3-11
Restoring the preinstalled software from the backup media 3-12

Chapter 4 : **Operating Basics**
Using the TouchPad 4-1
Using the internal modem 4-2
LAN 4-5
Wireless LAN 4-6
Using optical disc drives 4-7
Express Media Player 4-11
Writing CDs on a CD-RW/DVD-ROM drive 4-11
Writing CDs/DVDs on a DVD Super Multi drive supporting double layer disc recording 4-14
Writing CD/DVDs on a DVD Super Multi drive 4-18
RecordNow! Basic for TOSHIBA 4-21
DLA for TOSHIBA 4-23
InterVideo WinDVD Creator 2 Platinum 4-23
TOSHIBA Virtual Sound 4-26
TV-Out 4-27
Setting up more than one display 4-27
Cleaning the computer 4-27
Media Care 4-28
Moving the computer 4-29

Chapter 5 : **The Keyboard**
Typewriter keys 5-1
F1 ... F12 function keys 5-2
Soft keys: Fn key combinations 5-2
Hotkeys 5-3
Windows special keys 5-4
Keypad overlay 5-5
Generating ASCII characters 5-6

Chapter 6 : **Power and Power-Up Modes**
Power conditions 6-1
Power indicators 6-2
Battery types 6-3
Care and use of the battery pack 6-5
Replacing the battery pack 6-10
TOSHIBA Password Utility 6-12
Power-up modes 6-13
Panel power off/on 6-13
System automatic Standby/Hibernation 6-13

Chapter 7 : **HW Setup**
Accessing HW Setup 7-1
HW Setup Window 7-1

Chapter 8 : **Optional Devices**
PC Card 8-2
SD/MMC/SM/MS/MS Pro/xD Memory cards. 8-4
Memory expansion 8-7
Additional battery pack. 8-10
Additional AC adapter. 8-10
Parallel printer 8-11
External monitor 8-11
Television 8-12
i.LINK (IEEE1394) 8-12
Security lock 8-14

Chapter 9 : **Troubleshooting**
Problem solving process 9-1
Hardware and system checklist. 9-3
TOSHIBA support 9-17

Appendix A : **Specifications**

Appendix B : **Display Modes**

Appendix C : **AC Power Cord and Connectors**

Appendix D : **If your computer is stolen**

Glossary

Preface

Congratulations on your purchase of the TOSHIBA M40X Series computer. This powerful notebook computer provides excellent expansion capability, including multimedia devices, and it is designed to provide years of reliable, high-performance computing.

This manual tells how to set up and begin using your TOSHIBA M40X Series computer. It also provides detailed information on configuring your computer, basic operations and care, using optional devices and troubleshooting.

If you are a new user of computers or if you're new to portable computing, first read over the *Introduction* and *The Grand Tour* chapters to familiarize yourself with the computer's features, components and accessory devices. Then read *Getting Started* for step-by-step instructions on setting up your computer.

If you are an experienced computer user, please continue reading the preface to learn how this manual is organized, then become acquainted with this manual by browsing through its pages. Be sure to look over the *Special features* section of the *Introduction*, to learn about features that are uncommon or unique to the computer.

Manual contents

This manual has nine chapters, four appendices and a glossary.

Chapter 1, *Introduction*, is an overview of the computer's special features, utilities, and options.

Chapter 2, *The Grand Tour*, identifies the components of the computer and briefly explains how they function.

Chapter 3, *Getting Started*, provides a quick overview of how to begin operating your computer and gives tips on safety and designing your work area. Be sure to read the sections on setting up the operating system and on restoring the preinstalled software.

Chapter 4, *Operating Basics*, includes instructions on using the following devices: TouchPad, the optical disc drives, the internal modem, LAN and wireless LAN. It also provides tips on care of the computer, diskettes and DVD/CD-ROMs.

Chapter 5, *The Keyboard*, describes special keyboard functions including the keypad overlay and hotkeys.

Chapter 6, *Power and Power-Up Modes*, gives details on the computer's power resources.

Chapter 7, *HW Setup*, introduces you to the TOSHIBA Hard Ware Setup program.

Chapter 8, *Optional Devices*, describes the optional hardware available.

Chapter 9, *Troubleshooting*, provides helpful information on how to perform some diagnostic tests, and suggests courses of action if the computer doesn't seem to be working properly.

The Appendices provide technical information about your computer.

The Glossary defines general computer terminology and includes a list of acronyms used in the text.

Conventions

This manual uses the following formats to describe, identify, and highlight terms and operating procedures.

Abbreviations

On first appearance, and whenever necessary for clarity, abbreviations are enclosed in parentheses following their definition. For example: Read Only Memory (ROM). Acronyms are also defined in the Glossary.

Icons

Icons identify ports, dials, and other parts of your computer. The indicator panel also uses icons to identify the components it is providing information on.

Keys

The keyboard keys are used in the text to describe many computer operations. A distinctive typeface identifies the key top symbols as they appear on the keyboard. For example, **Enter** identifies the Enter key.

Key operation

Some operations require you to simultaneously use two or more keys. We identify such operations by the key top symbols separated by a plus sign (+). For example, **Ctrl + C** means you must hold down **Ctrl** and at the same time press **C**. If three keys are used, hold down the first two and at the same time press the tddhird.

DISKCOPY A: B: When procedures require an action such as clicking an icon or entering text, the icon's name or the text you are to type in is represented in the type face you see to the left.

Display

Names of windows or icons or text generated by the computer that appears on its display screen is presented in the type face you see to the left.

Messages

Messages are used in this manual to bring important information to your attention. Each type of message is identified as shown below.

Pay attention! A caution informs you that improper use of equipment or failure to follow instructions may cause data loss or damage your equipment.

Please read. A note is a hint or advice that helps you make best use of your equipment.

Chapter 1

Introduction

This chapter provides an equipment checklist, and it identifies the computer's features, options and accessories.

Basic features are described in a separate pamphlet.

Some of the features described in this manual may not function properly if you use an operating system that was not preinstalled by TOSHIBA.

Equipment checklist

Carefully unpack your computer. Save the box and packing materials for future use. Check to make sure you have all the following items:

Hardware

- TOSHIBA M40X Series Portable Personal Computer
- Universal AC Adapter and Power Cord
- USB Floppy Disk Drive (provided with some models)
- Modular cable for modem (provided with some models)

Software

Microsoft® Windows® XP Home Edition/Professional

- The following software preinstalled on your hard disk:
  - Microsoft® Windows® XP Home Edition/Professional
  - TOSHIBA Utilities
  - DVD Video Player
  - TOSHIBA Power Saver
  - TOSHIBA ConfigFree
  - TOSHIBA Assist
  - TOSHIBA Controls
  - TOSHIBA PC Diagnostic Tool
  - TOSHIBA Touch and Launch
  - TOSHIBA TouchPad On/Off Utility
  - TOSHIBA Zooming Utility
  - TOSHIBA SD Memory Card Format
  - TOSHIBA Acoustic Silencer
  - TOSHIBA HW Setup
  - TOSHIBA Accessibility
  - TOSHIBA Virtual Sound
  - TOSHIBA Hotkey Utility
  - TOSHIBA Password Utility
  - Online Manual
- Backup Media and Addtional Software
  - Product Recovery Disc
  - Additional Software CD *
  - Express Media Player Recovery CD *

* indicates an optional part that is dependant on the model purchased.

The system may not function properly if you use drivers that are not preinstalled or distributed by TOSHIBA

Documentation

- *TOSHIBA M40X Series Personal Computer User's Manual*
- *TOSHIBA M40X Series Quickstart*
- Instruction Manual for safety and comfort
- Warranty Information

Features

The *TOSHIBA M40X Series* computer uses TOSHIBA's advanced Large Scale Integration (LSI), Complementary Metal-Oxide Semiconductor (CMOS) technology extensively to provide compact size, minimum weight, low power usage, and high reliability. This computer incorporates the following features and benefits:

Processor

	Depending on the model you purchased: Mobile Intel® Celeron® M Processor 350J/360J/370 Intel® Pentium® M Processor 730/740/750/760/770

Chip Set

	Mobile Intel® 915PM/915GM/ 910GML Express Chipset ATI MOBILITY™ RADEON® X300/X600/X600SE GPU Chipset (Built-in controller depends on the model you purchased) ENE KB910 for Keyboard Controller, Battery management Unit, and RTC. TI PCI4510R Card Bus PCMCIA control or TI PCI7411 Card Bus PCMCIA control with Multiple Digital Media Card Slot support IEEE 1394 controller ALC250 for AC97 CODEC. Realtek RTL8100CL for LAN SMSC LPC47N217 for PIO and FIR controller

Memory

Main Memory Disclaimer	The graphics system in your computer may use part of the main system memory for graphics performance and therefore reduce the amount of system memory available for other computing activities. The amount of system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors.
Slot	1 SO-DIMM up to 1GB can be upgraded through memory expansion slot. You need to remove existing SO-DIMM if SO-DIMM is installed in memory expansion slot. Maximum upgradable system memory depends on the model you purchased.
L2 Cache	1MB L2 Cache (Intel® Celeron® M Processor) 2MB L2 Cache (Intel® Pentium® M Processor)
Video RAM	Depending on the model you purchased: Up to128 MB integrated solution and shared with main memory for Intel® 915GM/ 910GML Express Chipset. External 64/128 MB VGA DDR RAM for ATI MOBILITY™ RADEON® X300/X600/X600SE GPU Chipset.

BIOS

	1MB Flash ROM for system BIOS Suspend to RAM/Disk Password protection (System) Various hot key for system control Refreshable Complete ACPI 1.0b Function

Power

Battery Pack	8-cell Li-Ion smart battery pack with 14.8V*4300mAh capacity Approximately 4-12 hours or longer charging time to 100% battery capacity (system on) Approximately 4 hours charge time to 100% battery capacity (system off) Discharge time in shutdown mode is approximately 1 month
RTC Battery	The computer has an internal battery to back up the internal Real Time Clock (RTC) and calender. It is good with no external power source for 1 month on average.
AC adapter	The universal AC adapter provides power to the system and recharges the batteries when they are low. It comes with a detachable power cord.

FDD Devices

	External USB Floppy Disk Drive (depends on the model purchased)

TouchPad

	A TouchPad and control buttons in the palm rest enable control of the on-screen pointer.

Display

	15.4” TFT screen with a resolution of 1280 horizontal x 800 vertical pixels WXGA 15.0” TFT screen with a resolution of 1024 horizontal x 768 vertical pixels XGA

Disks

Fixed hard disk	Either one - 40.0 billion bytes (37.26GB) 60.0 billion bytes (55.88GB) 80.0 billion bytes (74.52GB) 100.0 billion bytes (93.16GB) 120.0 billion bytes (111.78GB) Bus Master IDE 9.5m/m 2.5" HDD Support Ultra DMA 100
CD-RW/DVD-ROM drive	Some models are equipped with a full- size CD-RW/DVD-ROM module that lets you record data to rewritable CD/CD-RWs as well as run either 12cm (4.72”) or 8cm (3.15”) CD/DVDs without using an adapter. It reads DVD-ROMs at maximum 8 speed and CD-ROMs at maximum 24 speed. It writes CD-R at up to 24 speed, CD-RW at up to 24 speed. This drive supports the same formats as the DVD-ROM drive. ■ DVD-ROM ■ DVD-Video ■ DVD-R ■ DVD-RW ■ CD-R ■ CD-RW ■ CD-DA ■ CD-Text ■ DVD-RAM ■ Photo CD (single/multi-session) ■ CD-ROM Mode1, Mode2 ■ CD-ROMXA Mode2 (Form1, Form2) ■ Enhanced CD(CD-EXTRA)

DVD Super Multi drive	Some models are equipped with a full- size DVD Dual module that lets you record data to rewritable CD/DVDs as well as run either 12cm (4.72") or 8cm (3.15") CD/DVDs without using an adaptor. It reads DVD-ROMs at maximum 8 speed and CD-ROMs at maximum 24 speed. It writes CD-R at up to 24 speed, CD-RW at up to 10 speed, DVD-R at maximum 8 speed, DVD-RW at maximum 4 speed, DVD+R at maximum 8 speed, DVD+RW at maximum 4 speed, and DVD-RAM at maximum 3 speed. This drive supports the same formats as the DVD-ROM drive. ■ DVD-ROM ■ DVD-Video ■ DVD-R ■ DVD-RW ■ DVD+R ■ DVD+RW ■ CD-DA ■ CD-Text ■ CD-R ■ CD-RW ■ DVD-RAM ■ Photo CD (single/multi-session) ■ CD-ROM Mode1, Mode2 ■ CD-ROMXA Mode2 (Form1, Form2) ■ Enhanced CD (CD-EXTRA)

DVD Super Multi drive with double layer disc recording support	Some models are equipped with a full-size DVD Super Multi drive module that lets you record data to rewritable CD/DVDs as well as run either 12cm(4.72”) or 8cm(3.15”) CD/DVDs without using an adapter. It reads DVD-ROMs at maximum 8 speed and CD-ROMs at maximum 24 speed. It writes CD-R at up to 24 speed, CD-RW at up to 10 speed, DVD-R at maximum 8 speed, DVD-RW at maximum 4 speed, DVD-RAM at maximum 3 speed, DVD+RW at maximum 4 speed, DVD+R at maximum 8 speed, DVD+R (double layer) at maximum 2.4 speed, and DVD-RAM at maximum 3 speed. This drive supports the same formats as the DVD-ROM drive. ■ DVD-ROM ■ DVD-Video ■ DVD-R ■ DVD-RW ■ DVD+R ■ DVD+RW ■ DVD-RAM ■ DVD+R (double layer) ■ CD-R ■ CD-RW ■ CD-DA ■ CD-Text ■ Photo CD (single/multi-session) ■ CD-ROM Mode1, Mode2 ■ CD-ROMXA Mode2 (Form1, Form2) ■ Enhanced CD (CD-EXTRA)

Computers in this series can be configured with multiple types of optical disc drive. For more information on the optical disc drives available, talk to your dealer. More information on using the optical disc drive can be found in Chapter 4, Operating Basics.

Slots (depending on configuration)

PC Card	Accommodates one type II device.
Multiple Digital Media Card (SD/ MMC/SM/MS/ MS Pro/xD)	This slot lets you easily transfer data from devices, such as digital cameras and Personal Digital Assistants, that use flash-memory. You can use a memory module in this slot.

Ports (depending on configuration)

External monitor	15-pin analog VGA port supports VESA DDC2B compatible functions.
Universal Serial Bus	The computer has three Universal Serial Bus (USB) ports that comply with the USB 2.0 standard, which enable data transfer speeds more than 40 times faster than USB 1.1 (which this computer also supports.) The USB drives may be used to transfer data at Low, Full, and High speeds.
i.LINK (IEEE1394)	This port enables high-speed data transfer directly from external devices such as digital video cameras.
Infrared	The serial infrared port is compatible with the Infrared Data Association (IrDA 1.1) standards.
TV Out	The 4-pin S-Video port is compatible with PAL or NTSC TV standard, supporting Macrovision 7.02 copy protection.
Parallel	This port is used to connect a parallel printer or other parallel device.

Multimedia

Sound system	Windows® Operating System compatible sound system provides internal speakers as well as jacks for an external microphone and headphone.
Express Media Player	Some computers in this series are equipped with the Express Media Player. This Player let you use the computer's fixed optical disc drive as a stand-alone audio CD-player/DVD player.
Headphone jack	A standard 3.5mm headphone jack
Microphone jack	A standard 3.5 mm mini microphone jack enables connection of monaural microphone input.

Communications

Modem	An internal modem provides capability for data and fax communication. It supports V.90 or V.92 depending on the region. The speed of data transfer and fax depends on analog telephone line conditions. It has a modem jack for connecting to a telephone line.
LAN	The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T) and Fast Ethernet LAN (100 Mbps 100BASE-TX)
Wireless LAN (depends on the model you purchased)	Some computers in this series are equipped with a wireless LAN mini-PCI card that is compatible with other LAN systems that support the following: 802.11a+g wireless LAN module/802.11g wireless LAN module. It has a Frequency Channel Selection (2.4 or 5 GHz) and allows roaming over multiple channels.

Security

	Boot-up password protection Two level password architecture

Security Lock Slot

	Receives an optional security lock in order to anchor the computer to a desk or other large, heavy object.

Special features

The following features are either unique to TOSHIBA computers or are advanced features, which make the computer more convenient to use.

Hotkeys	Key combinations let you quickly modify the system configuration directly from the keyboard without running a system configuration program.
Display Automatic Power off	This feature automatically cuts off power to the internal display when there is no input from the keyboard or pointing device for a time specified. Power is restored when any key is pressed or when there is input from a pointing device. You can specify the time in the TOSHIBA Power Saver.

Hard Disk Drive Automatic Power Off	This feature automatically cuts off power to the hard disk drive when it is not accessed for a time specified. Power is restored when the hard disk is accessed. You can specify the time in the TOSHIBA Power Saver.
System Automatic Standby/Hibernation	This feature automatically brings the system to standby mode or Hibernation mode when there is no input or hardware access for a time specified. You can specify the time and select either System Standby Mode or System Hibernate in the TOSHIBA Power Saver.
Keypad Overlay	A ten-key pad is integrated into the keyboard. Refer to the Keypad overlay section in Chapter 5, *The Keyboard*, for instructions on using the keypad overlay.
Power-on Password	Two levels of password security are available: supervisor and user. This feature prevents unauthorized access to your computer.
Battery Save Mode	This feature lets you save battery power. You can specify the Battery Save Mode in the TOSHIBA Power Saver.
Instant Security	A hotkey function blanks the screen providing quick and easy data security.
Panel Power Off/On	This feature turns power to the computer off when the display panel is closed and turns it back on when the panel is opened. You can specify the setting in the TOSHIBA Power Saver.
Low Battery Automatic Hibernation	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation and shuts down. You can specify the setting in the TOSHIBA Power Saver.
Hibernation	This feature lets you turn off the power without exiting from your software. The contents of main memory are saved to the hard disk. When you turn on the power again, you can continue working right where you left off. Refer to the Turning off the power section in Chapter 3, *Getting Started*, for details.

Standby	In Standby mode, power to the system remains on, but the CPU and all other devices are in sleep mode. When the computer is in standby mode, the Power LED flashes in amber. The computer enters Standby mode regardless of the Hibernate setting. Refer to the Turning off the power section in Chapter 3, *Getting Started*, for details.

- *Before entering Standby mode, be sure to save your data.*
- *Do not install or remove a memory module while the computer is in Standby mode. The computer or the module could be damaged.*
- *Do not remove the battery pack while the computer is in Standby mode. Data in memory will be lost.*

Utilities

This section describes preinstalled utilities and tells how to start them. For details on operations, refer to each utility's online manual, help files or readme files.

TOSHIBA Power Saver	There are two ways to display the Windows® XP Control Panel. The default is Category View. TOSHIBA Power Saver is under the Performance and Maintenance item.
TOSHIBA Assist	TOSHIBA Assist is a graphical user interface that provides easy access to help and services.
TOSHIBA PC Diagnostic Tool	TOSHIBA PC Diagnostic Tool displays the basic information on PC, and the test of built-in devices can also be performed. You can boot TOSHIBA PC Diagnostic Tool from the menu bar. As follows **start→All Programs→TOSHIBA→Utilities→ PC Diagnostic Tool**

TOSHIBA Controls	This utility allows you to do the following two sections. ■ Buttons There are 8 kinds of menu in the pull down menu list. The default value of CD/DVD button is CD/DVD. - CD/DVD - TV out - TOSHIBA Assist - Select your program - Default Mail soft - Default Browser - Disable Button - Microsoft Office One Note 2003 ■ Media Apps Select the application for audio and video playback.
DVD Player	The DVD Video Player is used to play DVD-Video. It has an on-screen interface and functions. Click start, point to All Programs, point to InterVideo WinDVD then click Inter Video WinDVD.
ConfigFree	ConfigFree is a suite of utilities to allow easy control of communication device and network connections. ConfigFree also allows you to find communication problems and create profiles for easy switching between location and communication networks. To start ConfigFree, click the start Button, point to All Programs, point to TOSHIBA, point to Networking and click ConfigFree.
TOSHIBA TouchPad On/Off Utility	Pressing Fn+F9 in a Windows® Operating System environment enables or disables the TouchPad function. When you press these hot keys, the current setting will change and be displayed as an icon.
RecordNow! Basic for TOSHIBA	You can create discs in several formats including audio CDs that can be played on a standard stereo CD player and data discs to store the files and folders on your hard disk drive. This software can be used on a model with a CD-R/RW/DVD-ROM drive or a DVD Super Multi drive.
DLA for TOSHIBA	DLA (Drive Letter Access) is the packet writing software which provides the function which writes files and/or folders to DVD+RW, DVD-RW or CD-RW disc via a drive letter like a floppy disk or other removable disks.

TOSHIBA Touch and Launch	TOSHIBA Touch and Launch is a tool that allows you to perform various tasks easily using Touch Pad. It is useful in the following conditions. - To open a file located on the desktop whose icon is obscured by a window. - To open a page contained in the Internet Explorer Favorites menu. - To display the list of currently open windows and change the active window. It also provides the following functions by customizing the settings. - To open a file stored in a predefined folder. - To quickly launch your frequently used applications which have been registered.
TOSHIBA Zooming Utility	This utility allows you to enlarge or reduce the icon size on the desktop or the application window.
TOSHIBA HW Setup	This program lets you customize your hardware settings according to the way you work with your computer and the peripherals you use. To start the utility, To access this utility, click start, click Control Panel, click Printers and Other Hardware and select the TOSHIBA HW Setup icon.
TOSHIBA Accessibility	This utility lets you make the Fn key sticky, that is, you can press it once, release it, and then press an “F number” key. The Fn key remains active until another key is pressed.
TOSHIBA Virtual Sound	TOSHIBA Virtual Sound works as the audio filter using SRS WOW XT and SRS TruSurround XT functions provided by SRS Labs, Inc. in United States. The audio filter enables you to enjoy the sound and music of better quality on your computer.
CD/DVD Drive Acoustic Silencer	This utility has the function to set up the speed (read) of CD/DVD drive. You can set up one of the modes: Normal Mode can read data early, and Quiet Mode can lessen noise.

Options

You can add a number of options to make your computer even more powerful and convenient to use. The following options are available:

Memory Modules	Two memory module can be installed in this computer. One module is underneath the keyboard, while the other module can be accessed through the compartment on the bottom of the computer.

Use only PC2700 compatible DDR memory modules. See your TOSHIBA dealer for details

Battery Pack	An additional battery pack can be purchased from your TOSHIBA dealer. Use it as a spare to increase your computer operating time.
AC adapter	If you use your computer at more than one site frequently, it may be convenient to purchase an additional AC adapter for each site so you will not have to carry the adapter with you.
USB FDD Kit	Lets you attach a floppy disk drive to your computer by means of a USB cable.

Chapter 2

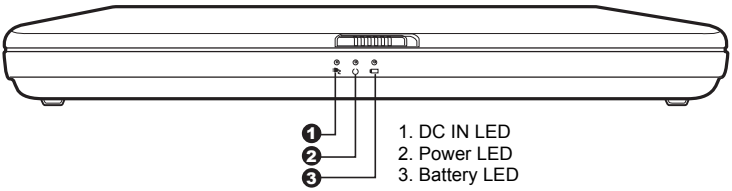
The Grand Tour

This chapter identifies the various components of your computer. Become familiar with each component before you operate the computer.

Certain types of notebook chassis are designed to accommodate all possible configurations for an entire product series. Your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the notebook chassis, unless you have selected all those features.

Front with the display closed

The following figure shows the computer front with its display panel in the closed position.

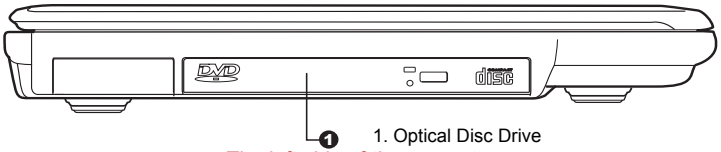


Front of the computer with display closed

DC IN LED	The DC IN LED indicates the computer is connected to the AC adapter and it is plugged into an AC power source.
Power LED	The Power LED flashes amber while the system is in Standby mode. The LED turns off when the computer is turned off or in hibernation mode. In normal operating mode, the LED is green.
Battery LED	The Battery LED indicates the battery's current charge/discharge status. It lights green when the battery is fully charged. It lights amber while the battery is being charged from the AC adapter. It flashes amber when the battery capacity is low.

Left side

The following figure shows the computer left side.

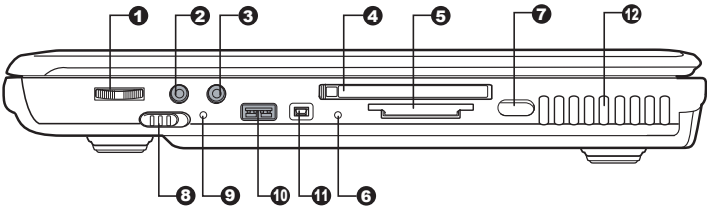


The left side of the computer

Optical Disc Drive	The computer is configured with a full-size optical disc drive module that lets you run either 12 cm (4.72") or 8 cm (3.15") discs without using an adapter. See the Drives section in this chapter for technical specifications on each drive and Chapter 4, *Operating Basics*, for information on using the drive and caring for discs. *The Optical Disc Activity LED illuminates when the drive is in use.*

Right side

The following figure shows the computer right side.



1. Volume Control
2. Headphone Jack
3. Microphone Jack
4. PC card slot
5. Multiple Digital Media Card slot*
6. Multiple Digital Media Card slot Access LED*
7. Infrared Port*
8. Wireless Communication Switch*
9. Wireless Communication LED*
10. Universal Serial Bus (USB) Port
11. i.Link (IEEE1394) Port*
12. FAN Vent

The right side of the computer

* This feature is available depending on the model you purchased.

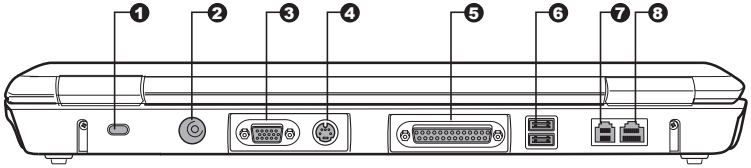
Volume Control	Use this dial to adjust the volume of the stereo speakers or headphones.
Headphone Jack	The headphone jack lets you connect stereo headphones or other audio-output devices such as external speakers. Connecting headphones or other devices to this jack automatically disables the internal speakers.

Microphone Jack	The standard 3.5 mm mini microphone jack enables connection of a three conductive type mini-jack for a monaural microphone.
PC Card Slot	The PC Card slot can accommodate one 5 mm PC Card (Type II). You can install any industry standard PC Card such as a SCSI adapter, Ethernet adapter or flash memory card.
Multiple Digital Media Card Slot	The Multiple Digital Media Card Slot allows you to use media cards from digital still cameras and various forms of portable information equipment. (This function is available depending on the model you purchased.)
Multiple Digital Media Card Slot Access LED	The Multiple Digital Media Card Slot Access LED lights up when the Multiple Digital Media Card is accessed. (This function is available depending on the model you purchased.)
Infrared Port	This infrared port is compatible with Infrared Data Association (IrDA) Fast InfraRed (FIR) standards. It enables cableless 4 Mbps data transfer with IrDA 1.1 compatible devices. (This function is available depending on the model you purchased.)
Wireless Communication Switch	The wireless communication switch turns on the wireless networking transceiver. The Wireless Communication LED beside it indicates that wireless networking is turned on. (This function is available depending on the model you purchased.)
Wireless Communication LED	Indicates whether the wireless LAN is active or not. (This function is available depending on the model you purchased.)
Universal Serial Bus (USB) Port	The Universal Serial Bus (USB 2.0 and 1.1) port enables USB-equipped devices (such as keyboards, mice, hard drives, scanners, and printers) to be connected to the computer.
i .LINK (IEEE1394) Port	Connect an external device, such as a digital video camera to this port for high-speed data transfer. This only applies the i.LINK model of the computer. This feature may not be present, depending on your configuration.
Fan Vent	FAN Vent helps CPU keep from overheating.

To prevent possible over heating of the CPU, never block the fan vent.

Back side

The following figure shows the computer back panel.



1. Security Lock
2. DC IN 19V Jack
3. RGB (Monitor) Port
4. TV Out Port
5. Parallel Port
6. Universal Serial Bus (USB) Port
7. Modem Jack
8. LAN Jack

The back side of the computer

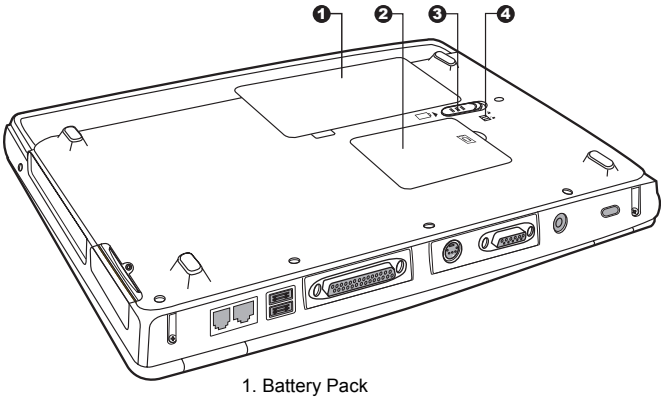
* Some models are not equipped with a Parallel Port.

Security Lock	A security cabel attaches to this port. The optional security cable anchors your computer to a desk or other large object to deter theft.
DC IN 19V Jack	The DC IN jack is where you plug in the AC adapter.
RGB (Monitor) Port	This 15-pin port lets you connect an external video display to the computer.
TV Out Port	Plug a 4-pin S- video cable into this connector for output of NTSC or PAL signal.
Parallel Port	This 25-pin parallel port is used to connect a parallel printer or other parallel device. It supports Extended Capabilities Port (ECP) standard.
Universal Serial Bus (USB) Ports	The Universal Serial Bus (USB 2.0 and 1.1) ports enable USB-equipped devices (such as keyboards, mice, hard drives, scanners, and printers) to be connected to the computer.
Modem Jack	In areas where an internal modem is installed as standard equipment, there is a modem jack that lets you use a modular cable to connect the modem directly to a telephone line.

Ether	**LAN Jack**	This jack lets you connect to a LAN. The adapter has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T) and Fast Ethernet LAN (100 megabits per second, 100BASE-TX). Two indicators built into the jack let you see the LAN status.

Underside

The following figure shows the underside of the computer. Make sure the display is closed before turning over your computer.



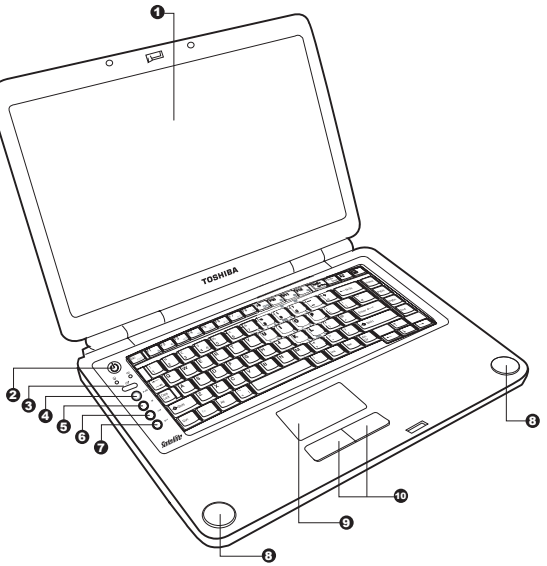
1. Battery Pack
2. Expansion Memory Socket
3. Battery Pack Latch
4. Battery Pack Lock

The bottom of the computer

	Battery Pack	The battery pack powers the computer when the AC adapter is not connected. For detailed information on the battery pack, refer to Chapter 6, *Power and Power-Up Modes*.
	Expansion Memory Socket	Use this socket to install a memory module to increase your computer's memory. Refer to the Memory Expansion section in Chapter 8, *Optional Devices*.
	Battery Pack Latch	Slide this latch to remove the battery pack. Will not work if the Battery Pack Lock is engaged.
	Battery Pack Lock	When you slide this to the locked position, the battery pack cannot be released even if you have slid the battery pack latch to the open position.

Front with the display open

The following figure shows the front of the computer with the display open. To open the display, slide the display latch on the front of the display and lift up. Position the display at a comfortable viewing angle.



1. Display Screen
2. Power Button
3. CD/DVD Button *
4. Play/Pause
5. Stop
6. Next
7. Previous
8. Left and Right Speakers
9. Touch Pad
10. Touch Pad Control Buttons

The front with the display open

* This feature is available depending on the model you purchased.

Display Screen	The LCD displays high-contrast text and graphics at a resolution up to 2048x1536 pixels. Refer to *Appendix B*. When the computer operates on the AC adapter the display screen's image will be somewhat brighter than when it operates on battery power. The brightness level is intended to save battery power.

To prolong the life of your display screen, use a screen saver when you're not working the computer and it is idle.

Power Button	Press the power button to turn the computer's power on and off. There is an LED inside the power button which shines blue when the system is on.
CD/DVD Button	Pressing this button in the power-off condition will run Express Media Player. Once Express Media Player is launched, Power indicator turns on and the audio button is enable. Meanwhile, when Express Media Player is running, pressing this button will do nothing. Pressing this button in the power-on or standby conditions will launch Windows Media® Player/WinDVD. (This function is available depending on the model you purchased.)

*When you use Express Media Player (*this function is available depending on the model you purchased*), please assign the CD/DVD button to "CD/DVD" in TOSHIBA Controls Properties.*

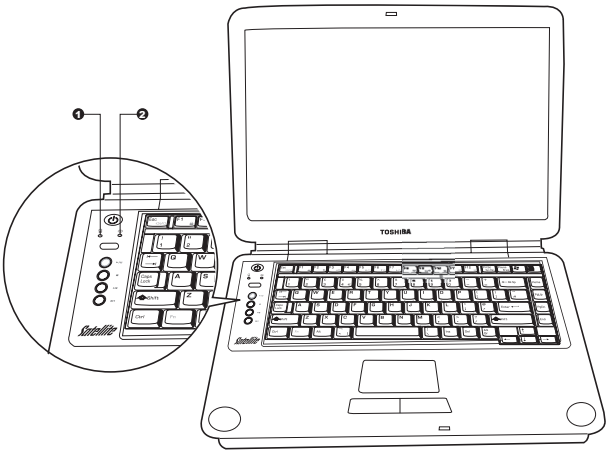
Play/Pause	Press this button to begin playing an audio CD, a DVD movie or digital audio files. This button also acts as a Pause button.
Stop	Stops playing the CD, DVD or digital audio.
Next	Skips forward to next tracks. Refer to Chapter 4, *Operating Basics*, for details.
Previous	Skips back to previous tracks. Refer to Chapter 4, *Operating Basics*, for details.

If Random or Shuffle is selected in Windows® Media Player, selecting Next or Previous advances to a random selection.

Left and Right Speakers	The audio speakers.
TouchPad	A pointing device located in the center of the palm rest is used to control the on-screen pointer. Refer to the Using the TouchPad section in Chapter 4, *Operating Basics*.
TouchPad Control Buttons	Control buttons below the TouchPad let you select menu items or manipulate text and graphics designated by the on-screen pointer.

System Status Indicators

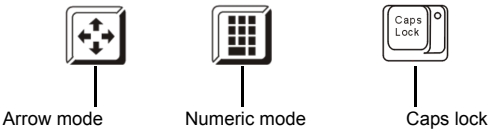
The following figures show the system indicator lights, which illaminate when various computer operations are in progress.



1. Hard Disk Drive LED
2. Optical Disc Drive LED

Hard Disk Drive LED	The Hard Disk Drive LED indicates that the Hard Disk Drive is being accessed. Every time your computer runs a program, opens a file, or performs some other function in which it must access the Hard Disk Drive, this light goes on.
Optical Disc Drive LED	This indicator lets you know when the Optical Disc Drive is being accessed.

Keyboard Indicators



	Arrow Mode	When the Arrow mode icon lights green, you can use the keypad overlay (light gray labeled keys) as cursor keys. Refer to the *Keypad Overlay* section in Chapter 5, *The Keyboard*.
	Numeric Mode	You can use the keypad overlay (light gray labeled keys) for numeric input when the Numeric mode icon lights green. Refer to the *Keypad Overlay* section in Chapter 5, *The Keyboard*.
	Caps Lock	The Caps Lock LED lights when you press the Caps Lock key. When this light is on, pressing a letter key on the keyboard produces an uppercase (capital) letter.

Optical Disc drive

One of the following optical disc drives is installed in the computer: CD-RW/ DVD-ROM drive or the DVD Super Multi drive (either single layer or double layer support, depending on the configuration of your computer). An ATAPI interface controller is used for CD/DVD-ROM operation. When the computer is accessing a disc, an indicator on the drive glows.

Region codes for DVD drives and media

The disc drive and its media are manufactured according to the specifications of six marketing regions. When you purchase DVD-Video, make sure it matches your drive, otherwise it will not play properly.

Code	Region
1	Canada, United States
2	Japan, Europe, South Africa, Middle East
3	Southeast Asia, East Asia
4	Australia, New Zealand, Pacific Islands, Central America, South America, Caribbean
5	Russia, Indian Subcontinent, Africa, North Korea, Mongolia
6	China

Writable discs

This section describes the types of writable discs. Check the specifications for your drive to for the type of discs it can write. Use Record Now! to write compact discs. Refer to Chapter 4, *Operating Basics*.

CDs

- CD-R discs can be written only once. The recorded data cannot be erased or changed.
- CD-RW discs can be recorded more than once. Use either 1, 2, or 4 multi speed CD-RW discs or high-speed 4- to 10-speed discs. The write speed of the ultra-speed CD-RW discs is maximum 24-speed.

DVDs

- DVD-R and DVD+R discs can be written only once. The recorded data cannot be erased or changed.
- DVD-RW, DVD+RW and DVD-RAM discs can be recorded more than once.

CD-RW/DVD-ROM drive

The full-size CD-RW/DVD-ROM drive module lets you record data to rewritable CDs as well as run either 12 cm (4.72") or 8 cm (3.15") discs without using an adapter.

The read speed is slower at the centre of a disc and faster at the other edge.

DVD read	8 speed (maximum)
CD read	24 speed (maximum)
CD-R write	24 speed (maximum)
CD-RW write	24 speed (maximum, ultra-speed media)

DVD Super Multi drive with double layer disc recording support

The full-size DVD super multi drive module lets you record data to rewritable discs as well as run either 12cm (4.72") or 8cm (3.15") discs without using an adapter.

The read speed is slower at the centre of a disc and faster at the other edge.

DVD read	8 speed (maximum)
DVD-R write	8 speed (maximum)
DVD-RW write	4 speed (maximum)
DVD+R write	8 speed (maximum)
DVD+RW write	4 speed (maximum)
DVD-RAM write	3 speed (maximum)
CD read	24 speed (maximum)
CD-R write	24 speed (maximum)
CD-RW write	10 speed (maximum, ultra-speed media)
DVD+R (DL) write	2.4 speed (maximum)

This drive can not use discs that allow writing faster than 8 or more speed (DVD-R, DVD+R with Single Layer), 4 or more speed (DVD-RW, DVD+RW), 3 speed (DVD-RAM) or ultra-speed+(CD-RW).

DVD Super Multi drive

The full-siza DVD super multi drive module lets you record data to rewritable CD/DVDs as well as run either 12cm (4.72") or 8cm (3.15") CD/DVDs without using an adaptor.

The read speed is slower at the centre of a disc and faster at the other edge.

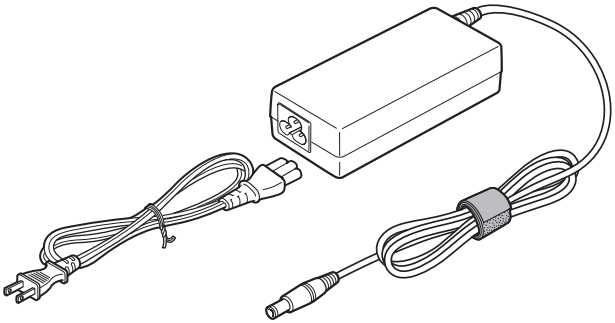
DVD read	8 speed (maximum)
DVD-R write	8 speed (maximum)
DVD-RW write	4 speed (maximum)
DVD+R write	8 speed (maximum)
DVD+RW write	4 speed (maximum)
DVD-RAM write	3 speed (maximum)
CD read	24 speed (maximum)
CD-R write	24 speed (maximum)
CD-RW write	10 speed (maximum, ultra-speed media)

This drive can not use discs that allow writing faster than 8 or more speed (DVD-R, DVD+R with Single Layer), 4 or more speed (DVD-RW, DVD+RW), 3 speed (DVD-RAM) or ultra-speed+(CD-RW).

AC adapter

The AC adapter converts AC power to DC power and reduces the voltage supplied to the computer. It can automatically adjust to any voltage from 100 to 240 volts and to a frequency of either 50 or 60 hertz, enabling you to use the computer in almost any country/region.

To recharge the battery, simply connect the AC adapter to a power source and the computer. See Chapter 6, *Power and Power-Up Modes*, for details.



The AC adapter

Use of the wrong adapter could damage your computer. TOSHIBA assumes no liability for any damage in such case. The output rating for the computer is 19 volts DC.

Please use only the AC Adapter supplied with the computer or an AC adapter certified by TOSHIBA.

Chapter 3

Getting Started

This chapter provides basic information to get you started using your computer. It covers the following topics:

- Setting up your work space - for your health and safety

Be sure also to read the Instruction Manual for safety and comfort. This guide, which is included with the computer, explains product liability.

- Connecting the AC adapter
- Opening the display
- Turning on the power
- Starting up for the first time
- Turning off the power
- Restarting the computer
- Restoring the preinstalled software from the Product recovery disc.

All users should be sure to carefully read the section Starting up for the first time, which describe actions to take when you turn on the power for the first time.

Setting up your work space

Establishing a comfortable work site is important for you and your computer. A poor work environment or stressful work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. Proper ambient conditions should also be maintained for the computer's operation. This section discusses the following topics:

- General conditions
- Placement of the computer and peripheral devices
- Seating and posture
- Lighting
- Work habits

General conditions

In general, if you are comfortable, so is your computer, but read the following to make sure your work site provides a proper environment.

- Make sure there is adequate space around the computer for proper ventilation.
- Make sure the AC power cord connects to an outlet that is close to the computer and easily accessible.
- The temperature should be 5 to 35 degrees Centigrade (41 to 95 degrees Fahrenheit) and the relative humidity should be 20 to 80 percent.
- Avoid areas where rapid or extreme changes in temperature or humidity may occur.
- Keep the computer free of dust, moisture, and exposure to direct sunlight.
- Keep the computer away from heat sources, such as electric heaters.
- Do not use the computer near liquids or corrosive chemicals.
- Some components in the computer, including data storage media, can be damaged by magnets. Do not place the computer near magnetic objects or bring magnetic objects close to the computer. Be careful of objects, such as stereo speakers, that produce strong magnetic fields during operation. Also, be careful with metal objects, such as bracelets, which can be inadvertently magnetized.
- Do not operate the computer in close proximity to a mobile phone.
- Leave ample ventilation room for the fan. Ensure that there are no obstructions around any of the system inlets or exhaust vents.

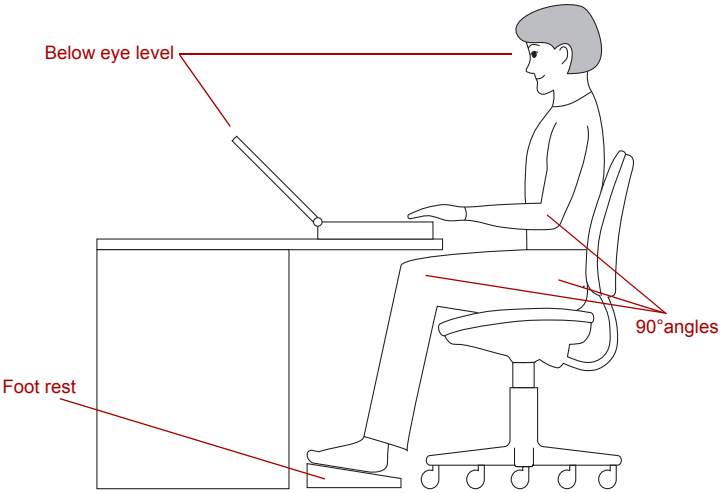
Placement of computer

Position the computer and peripheral devices to provide comfort and safety.

- Set the computer on a flat surface at a comfortable height and distance. The display should be no higher than eye level to avoid eye strain.
- Place the computer so that it is directly in front of you when you work and make sure you have adequate space to easily operate other devices.
- Allow adequate space behind the computer to let you freely adjust the display. The display should be angled to reduce glare and maximize visibility.
- If you use a paper holder, set it at about the same height and distance as the computer.

Seating and posture

The height of your chair in relation to the computer and keyboard as well as the support it gives your body are primary factors in reducing work strain.



Posture and positioning of the computer

- Place your chair so that the keyboard is at or slightly below the level of your elbow. You should be able to type comfortably with your shoulders relaxed.
- Your knees should be slightly higher than your hips. If necessary, use a foot rest to raise the level of your knees to ease pressure on the back of your thighs.
- Adjust the back of your chair so it supports the lower curve of your spine.
- Sit straight so that your knees, hips and elbows form approximately 90 degree angles when you work. Do not slump forward or lean back too far.

Lighting

Proper lighting can improve legibility of the display and reduce eye strain.

- Position the computer so that sunlight or bright indoor lighting does not reflect off the screen. Use tinted windows, shades or other screen to eliminate sun glare.
- Avoid placing the computer in front of bright light that could shine directly in your eyes.
- If possible, use soft, indirect lighting in your computer work area. Use a lamp to illuminate your documents or desk, but be sure to position the lamp so that it does not reflect off the display or shine in your eyes.

Work habits

A key to avoiding discomfort or injury from repetitive strain is to vary your activities.

If possible, schedule a variety of tasks into your work day. If you must spend long periods at the computer, finding ways to break up the routine can reduce stress and improve your efficiency.

- Sit in a relaxed posture. Good positioning of your chair and equipment as described earlier can reduce tension in your shoulders or neck and ease back strain.
- Vary your posture frequently.
- Occasionally stand up and stretch or exercise briefly.
- Exercise and stretch your wrists and hands a number of times during the day.
- Frequently, look away from the computer and focus your eyes on a distant object for several seconds, for example 30 seconds every 15 minutes.
- Take frequent short breaks instead of one or two long breaks, for example, two or three minutes every half hour.
- Have your eyes examined regularly and visit a doctor promptly, if you suspect you might be suffering from a repetitive strain injury.
- Please check every couple of months to ensure the fan inlets or exhaust vents (see sections 2-5 and 2-7) are unobstructed. Clean them if necessary.

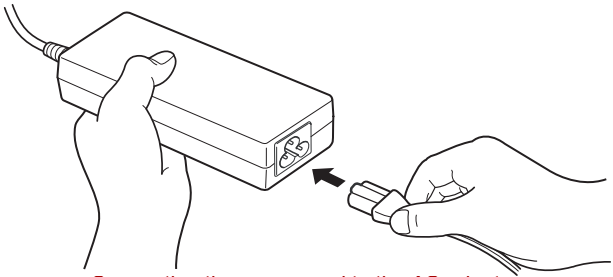
A number of books are available on ergonomics and repetitive strain injury or repetitive stress syndrome. For more information on these topics or for pointers on exercises for such stress points as hands and wrists, please check with your library or book vendor. Also refer to the computer's *Instruction Manual for safety and comfort*.

Connecting the AC adapter

Attach the AC adapter when you need to charge the battery or you want to operate from AC power. It is also the fastest way to get started, because the battery pack will need to be charged before you can operate from battery power. The AC adapter can be connected to any power source supplying from 100 to 240 volts and 50 or 60 hertz. For details on using the AC adapter to charge the battery pack, refer to Chapter 6, *Power and Power-Up Modes*.

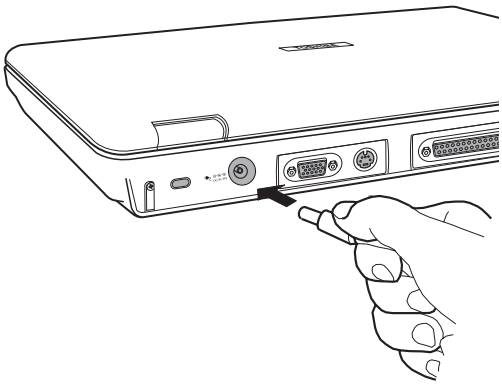
Use of the wrong adapter could damage your computer. TOSHIBA assumes no liability for any damage in such case. The output rating for the computer is 19 volts DC.

1. Connect the power cord to the AC adapter.



Connecting the power cord to the AC adapter

2. Connect the AC adapter to the DC output plug to the **DC IN** input port on the back of the computer.



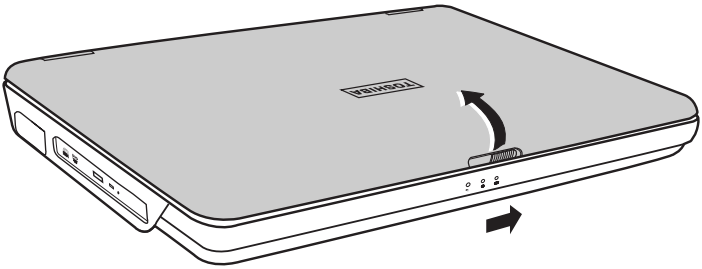
Connecting the adapter to the computer

3. Plug the power cord into alive wall outlet. The **Battery** and **DC IN** indicators on the front of the computer should glow.

Opening the display

The display panel can be rotated in a wide range of angles for optimal viewing.

1. Slide the display latch on the front of the computer to the right to unlatch the display panel.



Opening the display

2. Lift the panel up and adjust it to the best viewing angle for you.

Use reasonable care when opening and closing the display panel. Opening it vigorously or slamming it shut could damage the computer.

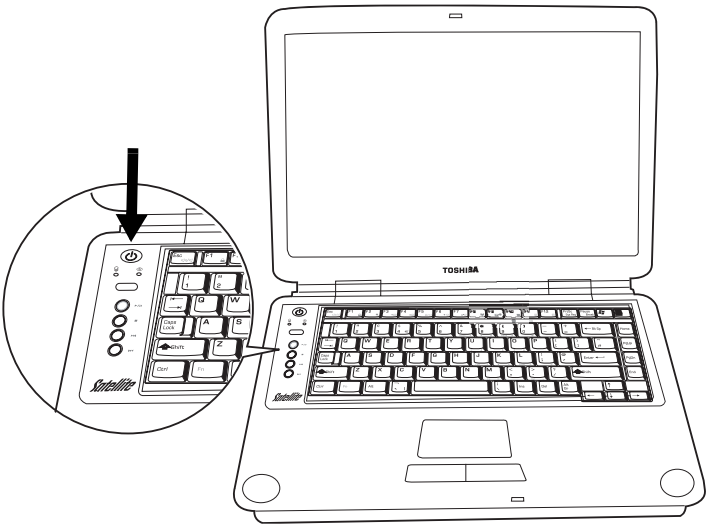
Turning on the power

This section describes how to turn on the power.

After you turn on the power for the first time, do not turn it off until you have set up the operating system. Refer to the section Starting up for the first time in this chapter.

1. If a USB Floppy Disk drive is connected, make sure the drive is empty. If a diskette is in the drive, press the eject button to remove it.
2. Open the display panel.

3. Press the computer's power button and release.



Turning on the power

Starting up for the first time

When you first turn on the power, the computer's initial screen is the Windows® XP Startup Screen Logo. Follow the on-screen directions for each screen. During setup, you can click the **Back** button to return to the previous screen.

Be sure to read the **Windows® Operating System End User License Agreement** carefully.

Turning off the power

The power can be turned off in one of the following modes: Shut down (Boot), Hibernation or Standby mode.

Shut Down mode (Boot mode)

When you turn off the power in Shut Down mode, no data is saved and the computer will boot to the operating system's main screen.

1. If you have entered data, save it to the hard disk or to a diskette.
2. Make sure all disk activity has stopped, then remove the optical disc drive or floppy drive diskette.

*Make sure the **Built-in Hard Disk Drive** and **optical disc drive** are off. If you turn off the power while a disk is being accessed, you can lose data or damage the disk.*

3. Click **start** and click **Turn Off Computer**. From the **Turn Off Computer** window click **Turn Off**.
4. Turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Hibernation mode

The hibernation feature saves the contents of memory to the hard disk when the computer is turned off. The next time the computer is turned on, the previous state is restored. The hibernation feature does not save the status of peripheral devices.

1. *While entering hibernation mode, the computer saves the contents of memory to the Hard Disk Drive. Data will be lost if you remove the battery or disconnect the AC adapter before the save is completed. Wait for the **Built-in Hard Disk Drive** indicator to go out.*
2. *Do not install or remove a memory module while the computer is in hibernation mode. Data will be lost.*

Benefits of Hibernation

The hibernation feature provides the following benefits:

- Saves data to the hard disk when the computer automatically shuts down because of a low battery.

For the computer to shut down in hibernation mode, the hibernation feature must be enabled in two places in Power Options: Hibernate tab and TOSHIBA Power Saver: Basic Setup tab. Otherwise, the computer will shut down in Standby mode. If battery power becomes depleted, data saved in Standby mode will be lost.

- You can return to your previous working environment immediately when you turn on the computer.
- Saves power by shutting down the system when the computer receives no input or hardware access for the duration set by the System hibernate feature.
- You can use the panel power off feature.

Starting Hibernation

You can also enable Hibernation by pressing Fn + F4. See Chapter 5, The Keyboard, for details.

To enter Hibernation mode, follow the steps below.

1. Click **start**.
2. Select **Turn Off Computer**.
3. Open the **Turn Off Computer** dialog box. **Hibernate** is not displayed.
4. Press the **Shift** key. The **Standby** item will change to **Hibernate**.
5. Select **Hibernate**.

Automatic Hibernation

The computer will enter Hibernate mode automatically when you press the power button or close the lid. First, however, make the appropriate settings according to the steps below.

1. Open the **Control Panel**.
2. Open **Performance and Maintenance** and open **Power Options**.
3. Select the **Hibernation** tab.
4. Select **Enable Hibernate,** then click **OK** button.
5. Open **Toshiba Power Saver**.
6. Select **Setup Action** tab.
7. Enable the desired Hibernation settings for **When I press the power button** and **When I close the lid of my portable computer**.
8. Click the **OK** button.

Data save in Hibernation mode

When you turn off the power in Hibernation mode, the computer takes a moment to save current memory data to the hard disk. During this time, the **Built-in Hard Disk Drive** indicator will light.

After you turn off the computer and memory is saved to the hard disk, turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Standby mode

In standby mode the power remains on, but the CPU and all other devices are in sleep mode.

- *If the computer is not used or accessed in any way, including receipt of e-mail, for approximately 15 or 30 minutes when the AC adapter is connected, the computer will automatically enter Standby mode (TOSHIBA Power Saver default).*
- *To restore operation, press the power button.*
- *If the computer automatically enters Standby mode while a network application is active, the application might not be restored when the computer wakes up from Standby.*
- *To prevent the computer from automatically entering Standby mode, disable Standby in TOSHIBA Power Saver. That action, however, will nullify the computer's Energy Star compliance.*

Standby precautions

- Before entering Standby mode, be sure to save your data.
- Do not remove/install memory or remove power components:
  - Do not remove/install the memory module. The computer or the module could be damaged.
  - Do not remove the Battery Pack.

  In any of the above cases, the standby configuration will not be saved.
- If you carry the computer on board an aircraft or into a hospital, be sure to shut down the computer in hibernation mode or in shutdown mode to avoid radio signal interference.

Benefits of standby

The standby feature provides the following benefits:

- Restores the previous working environment more rapidly than does hibernation.
- Saves power by shutting down the system when the computer receives no input or hardware access for the duration set by the System Standby feature.
- You can use the panel power off feature.

Enabling Standby

*You can also enable Standby by pressing **Fn + F3**. See Chapter 5, The Keyboard, for details.*

You can enter standby mode in one of three ways:

1. Click **start**, click **Turn Off Computer** and click **Stand by**.
2. Close the display panel. This feature must be enabled. Refer to the Setup Action tab in **TOSHIBA Power Saver** Utility described in the Control Panel.
3. Press the power button. This feature must be enabled. Refer to the Setup Action tab in **TOSHIBA Power Saver** Utility described in the Control Panel.

When you turn the power back on, you can continue where you left when you shut down the computer.

- *When the computer is shut down in standby mode, the power indicator glows amber.*
- *If you are operating the computer on battery power, you can lengthen the operating time by shutting down in hibernation mode. Standby mode consumes more power.*

Standby limitations

Standby will not function under the following conditions:

- Power is turned back on immediately after shutting down.
- Memory circuits are exposed to static electricity or electrical noise.

Restarting the computer

Certain conditions require that you reset the system. For example, if:

- You change certain computer settings.
- An error occurs and the computer does not respond to your keyboard commands.

There are three ways to reset the computer system:

1. Select **Restart** from the **Turn Off Computer** window in the **start** box.
2. If the computer is already on, press **Ctrl + Alt + Del**.
3. Press the power button to turn the computer off, then press it a second to time in order to restart.

Only use step 3 if the operating system freezes or locks up due to a crash. Performing step 3 should only ever be a last resort as you will lose all unsaved data and could potentially damage critical files.

Restoring the preinstalled software from the backup media

If preinstalled files are damaged, use the supplied backup media to restore them. To restore the operating system and all preinstalled software, follow the steps below.

Please use the Express Media Player Recovery CD first to reinstall the "Express Media Player" before you reinstall a Windows® operating system. (Depends on configuration)

Restoring the complete system

If pre-installed files are damaged, use the Express Media Player Recovery CD and the Product Recovery disc to restore them.

Some models do not have Express Media Player pre-installed, therefore the Express Media Player Recovery CD is not available.

In these instances please refer to the procedure in "Restoring the operating system" as described below.

Restoring the Express Media Player

To restore the Express Media Player , follow the steps below.

1. Load the Express Media Player Recovery CD in the optical media drive and turn off the computer's power.
2. Hold down the F12 key and turn on the power. When the boot menu appears, release the F12 key.
3. Use the cursor keys to select the CD/DVD drive in the Boot menu.
4. Follow the on-screen instructions and select 'Overwrite Installation' using the cursor keys to restore the Express Media Player.

When you are using "Delete all partitions" the hard disk will be reformatted and all data will be lost.

Restoring the operating system

To restore the operating system and all pre-installed software, follow the steps below.

When you reinstall the Windows® operating system, the hard disk will be reformatted and all data will be lost.

1. Load the Product Recovery disc in the drive and turn off the computer's power.
2. Power on your computer, when **In Touch with Tomorrow TOSHIBA** appears, press **F12** key. Boot Menu will appear.
3. Use the cursor keys to select the CD-ROM/DVD drive in the display menu.

4. Follow the on-screen instructions.
5. If your computer came with additional software installed, this software can not be recovered from the Product Recovery disk. Re-install these applications (e.g. Works Suite, DVD Player, Games, etc.) separately from other media.

Restoring TOSHIBA utilities and drivers

If Windows is working properly, individual drivers or applications can be separately restored. The TOSHIBA Tools & Utilities folder (C:\TOOLSCD) contains drivers and applications, which are included with your computer system. If your system drivers or applications have become damaged in some way, you can reinstall most of the components from this folder.

Create a copy of this folder to an external media for more convenience.

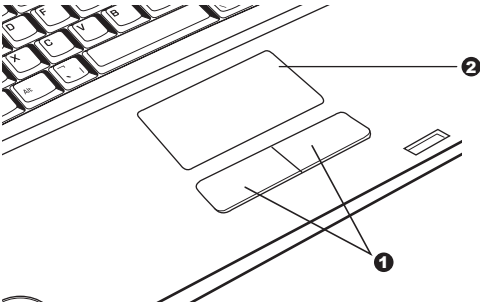
Chapter 4

Operating Basics

This chapter gives information on basic operations including using the TouchPad, optical disc drives, the internal modem, LAN, wireless LAN. It also provides tips on caring for your computer and on heat dispersal.

Using the TouchPad

To use the TouchPad, simply move your finger tip across it in the direction you want the on-screen pointer to go.



1. TouchPad control buttons
2. TouchPad

TouchPad and control buttons

Two buttons below the keyboard are used like the buttons on a mouse pointer.

Press the left button to select a menu item or to manipulate text or graphics designated by the pointer. Press the right button to display a menu or other function depending on the software you are using.

Do not press on the TouchPad too hard or press a sharp object such as a ball point pen against it. The TouchPad could be damaged.

The TouchPad has similar functions to a two-button mouse with a scroll wheel. For some functions, you can tap it instead of pressing a button.

You can customize pointing device actions in Mouse Properties. Open the Control Panel, select the Mouse icon and press Enter to open the Mouse Properties window.

Click: Click the left control button or tap the TouchPad one time.

Double-click: Click the left control button twice or tap the TouchPad twice.

Scroll Vertical: Move your finger up or down the right edge of the TouchPad.

Scroll Horizontal: Move your finger left or right along the bottom edge of the TouchPad.

Using the internal modem

This section describes how to make settings and connect the modem. Refer to the computer's online help files for more information. Refer also to the online help files for your modem software.

The internal modem does not support the voice functions described in the help files. All data and fax functions are supported.

- *In case of a lightning storm, unplug the modem cable from the telephone jack.*
- *Do not connect the modem to a digital telephone line. A digital line will damage the modem.*

IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord indicated in this manual.

Region selection

Telecommunication regulations vary from one country/region to another, so you will need to make sure the internal modem's settings are correct for the country/region in which it will be used.

1. Open the Modem Region Select application. It is located on the Programs menu at TOSHIBA > Networking.

Do not use the Country/Region Select function in the Modem setup utility in the Control Panel if the function is available. If you change the Country/Region in the Control Panel, the change may not take effect.

2. The Region Selection icon appears on the Windows Task Bar.
3. Click the icon with the primary mouse button to display a list of regions that the modem supports. A sub menu for telephony location information will also be displayed. A check will appear next to the currently selected region and telephony location.
4. Select a region from the region menu or a telephony location from the submenu.
   - When you click a region it becomes the modem's region selection, and the New Location for telephony will be set automatically.
   - When you select a telephony location, the corresponding region is automatically selected and it becomes the modem's current region setting.

Properties menu

Click the icon with the secondary mouse button to display properties menu on the screen.

Setting

You can enable or disable the following settings:

AutoRun Mode

Region Select Utility starts automatically when you start up the operating system.

Open the Dialing Properties dialog box after selecting region.

The dialing properties dialog box will be displayed automatically after you select the region.

Location list for region selection.

A submenu appears displaying location information for telephony.

Open dialog box, if the modem and Telephony Current Location region code do not match.

A warning dialog box is displayed if current settings for region code and telephony location are incorrect.

Modem Selection

If the computer cannot recognize the internal modem, a dialog box is displayed. Select the COM port for your modem to use.

Dialing Properties

Select this item to display the dialing properties.

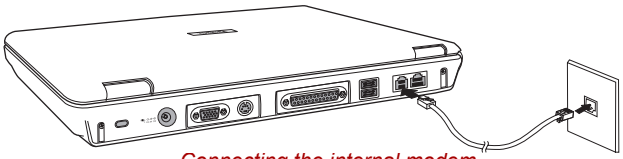
If you are using the computer in Japan, technical regulations described in the Telecommunications Business Law require that you select Japan region mode. It is illegal to use the modem in Japan with any other selection.

Connecting

To connect the internal modem cable, follow the steps below.

- *In case of a lightning storm, unplug the modem cable from the telephone jack.*
- *Do not connect the modem to a digital telephone line. A digital line will damage the modem.*

1. Plug one end of the modular cable into the modem jack.
2. Plug the other end of the modular cable into a telephone jack



Connecting the internal modem

Do not pull on the cable or move the computer while the cable is connected.

If you use a storage device such as a DVD-ROM drive or Hard Disk Drive connected to a 16-bit PC card, modem speed might be slow or communication might be interrupted.

If modem speed is low or communication is interrupted when you are using modem, please check and set CPU speed to Maximum by TOSHIBA Power Saver Utility.

Disconnecting

To disconnect the internal modem cable, follow the steps below.

1. Pinch the lever on the connector in the telephone jack and pull out the connector.
2. Disconnect the cable from the computer in the same manner.

LAN

The computer is equipped with LAN circuits that support Ethernet LAN (10 megabits per second, 10BASE-T) and Fast Ethernet LAN (100 megabits per second, 100BASE-TX). This section describes how to connect/disconnect to a LAN.

Do not install or remove an optional memory module while Wake-up on LAN is enabled.

Wake-up on LAN does not work without the AC adapter. Leave it connected, if you are using this feature.

Connecting the LAN cable

The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings could cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.

If you are using Fast Ethernet LAN (100 megabits per second, 100BASE-TX), be sure to connect with a CAT5 cable. You cannot use a CAT3 cable.

If you are using Ethernet LAN (10 megabits per second, 10BASE-T), you can connect with either a CAT5 or a CAT3.

To connect the LAN cable, follow the steps below.

1. Turn off the power to the computer and to all external devices connected to the computer.
2. Plug one end of the cable into the LAN jack. Press gently until you hear the latch click into place.

Connecting the LAN cable

3. Plug the other end of the cable into a LAN hub connector. Check with your LAN administrator before connecting to a hub.

Disconnecting the LAN cable

To disconnect the LAN cable, follow the steps below.

1. Pinch the lever on the connector in the computer's LAN jack and pull out the connector.
2. Disconnect the cable from the LAN hub in the same manner. Check with your LAN administrator before disconnecting from the hub.

Wireless LAN

The wireless LAN is compatible with other LAN systems that comply with the 802.11g wireless LAN standard.

It supports the following:

- Automatic Transmit Rate Select mechanism in the transmit range of 54, 11, 5.5, 2 and 1 Mbit/s.
- Advanced Encryption Standard (AES) data encryption, based on 128bit encryption algorithm.

Wake-up on LAN does not function on a Wireless LAN.

- Frequency Channel Selection (5GHz and 2.4 GHz)
- Roaming over multiple channels
- Card Power Management
- Wired Equivalent Privacy (WEP) data encryption. Wake-up on LAN does not function on a wireless LAN.

Wireless LAN Disclaimer

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations. The actual transmission speed will be lower than the theoretical maximum speed.

To use the Atheros SuperAG™ or SuperG™ function, your client and access point must support the corresponding feature. Performance of these functions may vary depending on the format of data transmitted.

Security

1. Be sure to enable WEP(encryption) function. Otherwise your computer could be left wide open to illicit access via the Wireless LAN and may result in an intrusion leading to the theft or even loss of stored data, among other things. Moreover, the owner of an Internet connection is responsible for all browsing, downloading, and uploading activities on said connection; an unsecure Wireless network connected directly to the Internet is an open invitation for outsiders to abuse your ISP account privileges. Therefore, TOSHIBA strongly recommends that you enable the WEP function.
2. TOSHIBA is not liable for data packet theft due to the use of the Wireless LAN, and any damage thereof.

Wireless communication switch

You can enable or disable wireless LAN function, with the on/off switch. No transmissions are sent or received when the switch is off. Slide the switch forward to turn it on and backward to turn it off.

Turn the switch off in airplanes and hospitals. Check the LED. It stops glowing when the wireless communication function is off.

Wireless communication LED

The LED indicates the status of the wireless communication functions.

LED status	Indication
LED off	Wireless communication switch is set to off
LED glows	Wireless communication switch is on

Using optical disc drives

The illustrations in this section might differ slightly from your drive, but operation is the same for all optical disc drives. The full-size drive provides high-performance execution of disc-based programs. You can run either 12 cm (4.72") or 8 cm (3.15") discs without an adapter. An ATAPI interface controller is used for disc drive operation. When the computer is accessing a disc, an indicator on the drive illuminates.

Use the WinDVD application to view DVD-Video discs.

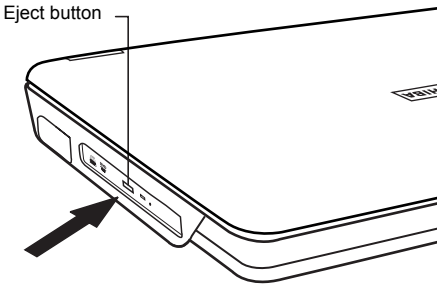
If you have a CD-RW/DVD-ROM drive, refer also to the Writing CDs on CD-RW/DVD-ROM drive section for precautions on writing to CDs.

If you have a DVD Super Multi drive, refer also to the Writing CD/DVDs on DVD Super Multi drive section for precautions on writing to CDs.

Loading compact discs

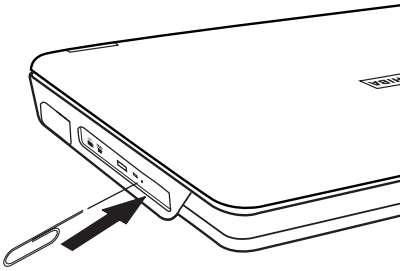
To load a disc, follow the steps below.

1. Turn on the power.
2. a. Press the eject button to open the drawer slightly.



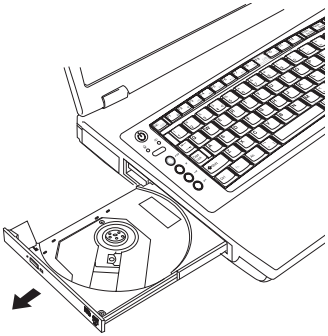
Pressing the eject button

b. Pressing the eject button will not open the drawer when the computer's power is off. If the power is off, you can open the drawer by inserting a slender object (about 15 mm) such as a straightened paper clip into the eject hole just to the right of the eject button.



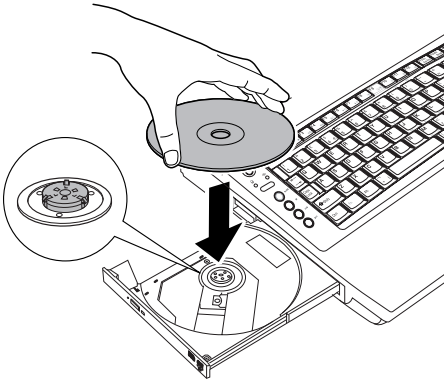
Manual release with the eject hole

3. Grasp the drawer gently and pull until it is fully open.



Pulling the drawer open

4. Lay the disc, label side up, in the drawer.

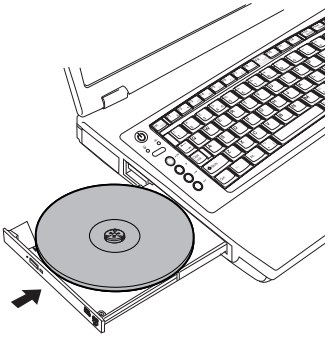


Inserting a disc

Be careful not to touch the lens or the area around it. Doing so could cause the drive to malfunction.

5. Press gently at the center of the disc until you feel it click into place. The disc should lie below the top of the spindle, flush with its base.
6. Push the centre of the drawer to close it. Press gently until it locks in place.

If the disc is not seated properly when the drawer is closed, it might be damaged. Also, the drawer might not open fully when you press the eject button.



Closing the drive drawer

Removing compact discs

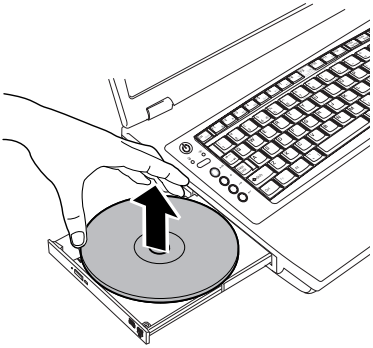
To remove the disc, follow the steps below.

*Do not press the eject button while the computer is accessing the disc drive. Wait for the **optical disc** indicator to go out before you open the drawer. Also, if the disc is spinning when you open it, wait for it to stop before you remove it.*

1. To pop the drawer partially open, press the eject button. Gently pull the drawer out until it is fully opened.

- *When the drawer pops open slightly, wait a moment to make sure the disc has stopped spinning before pulling the drawer fully open.*
- *Turn off the power before you use the eject hole. If the disc is spinning when you open the drawer, it could fly off the spindlend cause injury.*

2. The disc extends slightly over the sides of the drawer so you can grasp it. Hold the it gently and lift it out.



Removing a disc

3. Push the centre of the drawer to close it. Press gently until it locks into place.

Buttons

The CD/DVD button can be assigned special functions in the TOSHIBA Controls Properties.

CD/DVD play control buttons

In addition to the power button, the following four buttons control functions of the optical disc drive and Digital Audio Data:

Play/Pause	Starts or pauses play
Stop	Stops play
Next	Advances to the next track, chapter or data
Previous	Returns to the previous track, chapter or data

If Random or Shuffle is selected in Windows® Media Player, selecting Next or Previous advances to a random selection.

Express Media Player

Express Media Player *is availble depending on the model you purchased*

Express Media Player is a quick play feature that enables users to perform DVD and CD playback without using Windows®.

Press F1 to show the pop up guide for Express Media Player. This guide is available while Express Media Player is active.

Press F2 to display the settings menu.

To change your language setting use the cursor keys and [Enter] to navigate to "General Setup/Language Select/<list>" and choose a language from the list.

Express Media Player is available only for the LCD and has the following restrictions.

1. Express Media Player does not support LCD/CRT, CRT, TV, LCD/TV and Multi-Monitor.
2. Depending the video being played, noise may be present.
3. When WinDVD uses pre-installation.
4. External display output (CRT/S-Video out) is not supposed to support.

Writing CDs on a CD-RW/DVD-ROM drive

You can use the CD-RW/DVD-ROM drive to write data to CD-R/RW discs. The following applications for writing are preinstalled:
Record Now!/DLA, licensed by Sonic Solutions.

Important message

Before you write or rewrite to CD-R/RW disc, read and follow all setup and operating instructions in this section. If you fail to do so, the CD-RW/DVD-ROM drive may not function properly, and you may fail to write or rewrite, lose data or incur other damage.

Disclaimer

TOSHIBA does not bear responsibility for the following:

- Damage to any CD-R/-RW disc that may be caused by writing or rewriting with this product.
- Any change or loss of the recorded contents of CD-R/-RW disc that may be caused by writing or rewriting with this product, or for any business profit loss or business interruption that may be caused by the change or loss of the recorded contents.
- Damage that may be caused by using third party equipment or software.

Given the technological limitations of current optical disc writing drives, you may experience unexpected writing or rewriting errors due to disc quality or problems with hardware devices. Also, it is a good idea to make two or more copies of important data, in case of undesired change or loss of the recorded contents.

CD-R discs can be written only once. CD-RW discs can be rewritten many times.

Before writing or rewriting

Please observe the following points when you write or rewrite the data.

- We recommend the following manufacturers of CD-R and CD-RW media. Media quality can affect write or rewrite success rates.

CD-R:	TAIYOYUDEN CO., LTD. MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd. Hitachi Maxell Ltd.
CD-RW:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.

TOSHIBA has confirmed the operation of CD-R and CD-RW media of the manufacturers above. Operation of other media cannot be guaranteed.

- CD-RW can generally be rewritten about 1,000 times. However, the actual number of rewrites is affected by the quality of the media and the way it is used.
- Be sure to connect the universal AC adapter when you write or rewrite.
- Be sure to close all other software programs except the writing software.
- Do not run software such as a screen saver which can put a heavy load on the CPU.
- Operate the computer at full power. Do not use power-saving features.
- Do not write while virus check software is running. Wait for it to finish, then disable virus detection programs including any software that checks files automatically in the background.

- Do not use hard disk utilities, including those intended to enhance Hard Disk Drive access speed. They may cause unstable operation and damage data.
- Write from the computer's Hard Disk Drive to the CD. Do not try to write from shared devices such as a LAN server or any other network device.
- Writing with software other than Sonic RecordNow! has not been confirmed. Therefore, operation with other software cannot be guaranteed.

When writing or rewriting

Note the following when you write or rewrite a CD-R or CD-RW.

- Always copy data from the Hard disk drive to the CD. Do not use cut-and-paste. The original data will be lost if there is a write error.
- Do not perform any of the following actions:
  - Change users in the Windows XP operating system.
  - Operate the computer for any other function, including use of a mouse or TouchPad, closing/opening the LCD panel.
  - Start a communication application, such as a modem.
  - Apply impact or vibration to the PC.
  - Install, remove or connect external drives, including the following: PC card, USB devices, external display, i.LINK devices, optical digital devices.
  - Open the optical disc drive.
- If the media is poor in quality, dirty or damaged, writing or rewriting errors may occur.
- Set the computer on a level surface and avoid places subject to vibration, such as airplanes, trains, or cars. Do not use an unstable surface, such as a stand.
- Keep mobile phones and other wireless communication devices away from the computer.

Writing CDs/DVDs on a DVD Super Multi drive supporting double layer disc recording

You can use the DVD Super Multi drive to write data to either CD-R/RW or DVD-R/-RW/+R/+RW/-RAM discs. The following applications for writing are preinstalled:
Record Now!/DLA, licensed by Sonic Solutions. InterVideo WinDVD Creator 2 Platinum, which is a product of InterVideo, Inc.

Important message

Before you write or rewrite to CD-R/RW or DVD-R/-RW/+R/+RW/-RAM disc, read and follow all set-up and operating instructions in this section. If you fail to do so, the DVD Super Multi drive may not function properly, and you may fail to write or rewrite, lose data or incur other damage.

Disclaimer

TOSHIBA does not bear responsibility for the following:

- Damage to any CD-R/RW or DVD-R/-RW/+R/+RW/-RAM disc that may be caused by writing or rewriting with this product.
- Any change or loss of the recorded contents of CD-R/RW or DVD-R/-RW/ +R/+RW /-RAM disc that may be caused by writing or rewriting with this product, or for any business profit loss or business interruption that may be caused by the change or loss of the recorded contents.
- Damage that may be caused by using third party equipment or software.

Given the technological limitations of current optical disc writing drives, you may experience unexpected writing or rewriting errors due to disc quality or problems with hardware devices. Also, it is a good idea to make two or more copies of important data, in case of undesired change or loss of the recorded contents.

Before writing or rewriting

Please observe the following points when you write or rewrite data.

- Based on TOSHIBA's limited compatibility testing, we suggest the following manufacturers of CD-R/RW and DVD-R/+R/-RW/+RW/-RAM disc. However, in no event does TOSHIBA guarantee the operation, quality or performance of any disc. Disc quality can affect write or rewrite success rates.

CD-R:	TAIYOYUDEN CO., LTD. MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd. Hitachi Maxell Ltd.
CD-RW:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
DVD-R:	**DVD Specifications for Recordable Disc for General Version 2.0** TAIYOYUDEN CO., LTD. Matsushita Electric Industrial Co., Ltd.
DVD-RW:	**DVD Specifications for Re-recordable Disc for Version 1.1 or Version 1.2** VICTOR COMPANY OF JAPAN, LIMITED MITSUBISHI CHEMICAL CORPORATION
DVD+R:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
DVD+RW:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
*DVD-RAM:	**DVD Specifications for DVD-RAM Disc for Version 2.0 or Version 2.1** Matsushita Electric Industrial Co., Ltd. Hitachi Maxell Ltd. *DVD Multi drive and DVD Super Multi can use DVD-RAM.
DVD+R (Double Layer):	MITSUBISHI CHEMICAL CORPORATION

- If the disc is poor in quality, dirty or damaged, writing or rewriting errors may occur. Be careful to check the disc for dirt or damage before you use it.
- The actual number of rewrites to CD-RW or DVD-RW/+RW/-RAM is affected by the quality of the disc and the way it is used.
- There are two types of DVD-R: authoring and general use discs. Do not use authoring discs. Only general use discs can be written to by a computer drive.

- You can use DVD-RAM discs that can be removed from a cartridge and DVD-RAM discs designed without a cartridge. You cannot use a disc with a 2.6 GB single-sided capacity or 5.2 GB double-sided capacity.
- Other DVD-ROM drives for computers or other DVD players may not be able to read DVD-R/+R/-RW/+RW/-RAM discs.
- Data written to a CD-R/DVD-R/+R disc cannot be deleted either in whole or in part.
- Data deleted (erased) from a CD-RW and DVD-RW/+RW/-RAM disc cannot be recovered. Check the content of the disc carefully before you delete it. If multiple drives that can write data to discs are connected, be careful not to delete data from the wrong drive.
- In writing to a DVD-R/+R/-RW/+RW disc, some disc space is required for file management, so you may not be able to write the full capacity of the disc.
- Since the disc is based on the DVD-R/-RW standard, it will be filled with dummy data if the written data is less than about 1 GB. Even if you write only a small amount of data, it might take time to fill in the dummy data.
- Two types of DVD-R/+R/-RW/+RW/-RAM discs are on the market: data and video. Use a video disc to store video data. You can use video discs on a DVD recorder as well as on your computer's DVD-ROM drive. You cannot use data discs on a DVD recorder.
- DVD-RAM formatted by FAT32 cannot be read in Windows 2000 without DVD-RAM Driver Software.
- When multiple drives that can write data to discs are connected, be careful not to write to the wrong drive.
- Be sure to connect the universal AC adapter before you write or rewrite.
- Before you enter standby/hibernation mode, be sure to finish DVD-RAM writing. Writing is finished if you can eject DVD-RAM media.
- Be sure to close all other software programs except the writing software.
- Do not run software such as a screen saver, which can put a heavy load on the CPU.
- Operate the computer in the full-power mode. Do not use power-saving features.
- Do not write while virus check software is running. Wait for it to finish, then disable virus detection programs including any software that checks files automatically in the background.
- Do not use hard disk utilities, including those intended to enhance Hard Disk Drive access speed. They may cause unstable operation and data damage.
- Write from the computer's Hard Disk Drive to the disc. Do not try to write from shared devices such as a LAN server or any other network device.
- Writing with software other than Sonic RecordNow! has not been confirmed. Therefore, operation with other software cannot be guaranteed.

When writing or rewriting

Please observe/consider the following when you write or rewrite to a CD-R/RW, DVD-R/-RW/-RAM or DVD+R/+RW disc.

- Do not perform any of the following actions when writing or rewriting:
  - Change users in the Windows XP operating system.
  - Operate the computer for any other function, including using a mouse or Touch Pad or closing/opening the LCD panel.
  - Start a communication application such as a modem.
  - Apply impact or vibration to the computer.
  - Install, remove or connect external devices, including the following: PC card, USB devices, external display, optical digital devices.
  - Use of the Audio/Video control button to reproduce music or voice.
  - Open the drive.
- Do not use shut down/log off and standby/hibernation while writing or rewriting.
- Make sure writing or rewriting is completed before going into standby/hibernation. Writing is completed if you can open the drive tray.
- Set the computer on a level surface and avoid places subject to vibration such as airplanes, trains or cars. Do not use an unstable surface such as a stand.
- Keep mobile phones and other wireless communication devices away from the computer.
- Always copy data from the Hard Disk Drive to the DVD-RAM. Do not use cut-and-paste. The original data will be lost if there is a write error.

Writing CD/DVDs on a DVD Super Multi drive

You can use the DVD Super Multi drive to write data to either CD-R/RW or DVD-R/-RW/+R/+RW/-RAM discs. The following applications for writing are preinstalled:
Record Now!/DLA, licensed by Sonic Solutions. InterVideo WinDVD Creator 2 Platinum, which is a product of InterVideo, Inc.

Important message

Before you write or rewrite to CD-R/RW or DVD-R/-RW/+R/+RW/-RAM disc, read and follow all set-up and operating instructions in this section. If you fail to do so, the DVD Super Multi drive may not function properly, and you may fail to write or rewrite, lose data or incur other damage.

Disclaimer

TOSHIBA does not bear responsibility for the following:

- Damage to any CD-R/RW or DVD-R/-RW/+R/+RW/-RAM disc that may be caused by writing or rewriting with this product.
- Any change or loss of the recorded contents of CD-R/RW or DVD-R/-RW/+R/+RW/-RAM disc that may be caused by writing or rewriting with this product, or for any business profit loss or business interruption that may be caused by the change or loss of the recorded contents.
- Damage that may be caused by using third party equipment or software.

Given the technological limitations of current optical disc writing drives, you may experience unexpected writing or rewriting errors due to disc quality or problems with hardware devices. Also, it is a good idea to make two or more copies of important data, in case of undesired change or loss of the recorded contents.

Before writing or rewriting

Please observe the following points when you write or rewrite data.

- Based on TOSHIBA's limited compatibility testing, we suggest the following manufacturers of CD-R/RW and DVD-R/+R/-RW/+RW/-RAM disc. However, in no event does TOSHIBA guarantee the operation, quality or performance of any disc. Disc quality can affect write or rewrite success rates.

CD-R:	TAIYOYUDEN CO., LTD. MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd. Hitachi Maxell Ltd.
CD-RW:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
DVD-R:	**DVD Specifications for Recordable Disc for General Version 2.0** TAIYOYUDEN CO., LTD. Matsushita Electric Industrial Co., Ltd.
DVD-RW:	**DVD Specifications for Re-recordable Disc for Version 1.1 or Version 1.2** Victor Company of Japan, Ltd. MITSUBISHI CHEMICAL CORPORATION
DVD+R:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
DVD+RW:	MITSUBISHI CHEMICAL CORPORATION RICOH Co., Ltd.
*DVD-RAM:	**DVD Specifications for DVD-RAM Disc for Version 2.0 or Version 2.1** Matsushita Electric Industrial Co., Ltd. Hitachi Maxell Ltd. *DVD Multi drive and DVD Super Multi can use DVD-RAM.

- If the disc is poor in quality, dirty or damaged, writing or rewriting errors may occur. Be careful to check the disc for dirt or damage before you use it.
- The actual number of rewrites to CD-RW or DVD-RW/+RW/-RAM is affected by the quality of the disc and the way it is used.
- There are two types of DVD-R: authoring and general use discs. Do not use authoring discs. Only general use discs can be written to by a computer drive.
- Other DVD-ROM drives for computers or other DVD players may not be able to read DVD-R/+R/-RW/+RW/-RAM discs.
- Data written to a CD-R/DVD-R/+R disc cannot be deleted either in whole or in part.

- Data deleted (erased) from a CD-RW and DVD-RW/+RW/-RAM disc cannot be recovered. Check the content of the disc carefully before you delete it. If multiple drives that can write data to discs are connected, be careful not to delete data from the wrong drive.
- In writing to a DVD-R/+R/-RW/+RW disc, some disc space is required for file management, so you may not be able to write the full capacity of the disc.
- Since the disc is based on the DVD-R/-RW standard, it will be filled with dummy data if the written data is less than about 1 GB. Even if you write only a small amount of data, it might take time to fill in the dummy data.
- Two types of DVD-R/+R/-RW/+RW/-RAM discs are on the market: data and video. Use a video disc to store video data. You can use video discs on a DVD recorder as well as on your computer's DVD-ROM drive. You cannot use data discs on a DVD recorder.
- DVD-RAM formatted by FAT32 cannot be read in Windows 2000 without DVD-RAM Driver Software.
- When multiple drives that can write data to discs are connected, be careful not to write to the wrong drive.
- Be sure to connect the universal AC adapter before you write or rewrite.
- Before you enter standby/hibernation mode, be sure to finish DVD-RAM writing. Writing is finished if you can eject DVD-RAM media.
- Be sure to close all other software programs except the writing software.
- Do not run software such as a screen saver, which can put a heavy load on the CPU.
- Operate the computer in the full-power mode. Do not use power-saving features.
- Do not write while virus check software is running. Wait for it to finish, then disable virus detection programs including any software that checks files automatically in the background.
- Do not use hard disk utilities, including those intended to enhance Hard Disk Drive access speed. They may cause unstable operation and data damage.
- Write from the computer's Hard Disk Drive to the disc. Do not try to write from shared devices such as a LAN server or any other network device.
- Writing with software other than Sonic RecordNow! has not been confirmed. Therefore, operation with other software cannot be guaranteed.

When writing or rewriting

Please observe/consider the following when you write or rewrite to a CD-R/RW, DVD-R/-RW/-RAM or DVD+R/+RW disc.

- Do not perform any of the following actions when writing or rewriting:
  - Change users in the Windows XP operating system.
  - Operate the computer for any other function, including using a mouse or Touch Pad or closing/opening the LCD panel.
  - Start a communication application such as a modem.
  - Apply impact or vibration to the computer.
  - Install, remove or connect external devices, including the following: PC card, USB devices, external display, optical digital devices.
  - Use of the Audio/Video control button to reproduce music or voice.
  - Open the drive.
- Do not use shut down/log off and standby/hibernation while writing or rewriting.
- Make sure writing or rewriting is completed before going into standby/hibernation. Writing is completed if you can open the drive tray.
- Set the computer on a level surface and avoid places subject to vibration such as airplanes, trains or cars. Do not use an unstable surface such as a stand.
- Keep mobile phones and other wireless communication devices away from the computer.
- Always copy data from the Hard Disk Drive to the DVD-RAM. Do not use cut-and-paste. The original data will be lost if there is a write error.

RecordNow! Basic for TOSHIBA

Note the following limitations when you use RecordNow!:

- DVD-Video cannot be created using RecordNow!
- DVD-Audio cannot be created using RecordNow!
- You cannot use the RecordNow! “Audio CD for Car or Home CD Player” function to record music to the DVD-R/-RW or DVD+R/+RW disc.
- Do not use the “Exact Copy” function of RecordNow! to copy DVD-Video and DVD-ROM with copyright protection.
- DVD-RAM disc cannot be backed up with the “Exact Copy” function of RecordNow!
- You cannot back up a CD-ROM or CD-R/RW to DVD-R/-RW or DVD+R/+RW using the “Exact Copy” function of RecordNow!.

- You cannot back up DVD-ROM, DVD-Video or DVD-R/-RW or DVD+R/+RW to CD-R/RW using the RecordNow!
- RecordNow! cannot record in packet format.
- You might not be able to use the “Exact Copy” function of RecordNow! to backup a DVD-R/-RW or DVD+R/+RW disc that was made with other software on adifferent DVD-R/-RW or DVD+R/+RW recorder.
- If you add data to a DVD-R and DVD+R disc that you have already recorded to, you might not be able to read the added data under some circumstances. It cannot be read in 16-bit operating systems, such as Windows 98SE and Windows ME. In Windows NT4, you will need Service Pack 6 or later to read added data. In Windows 2000, you will need Service Pack 2 or later to read it. Some DVD-ROM and DVD-ROM&CD-R/RW drives cannot read added data regardless of the operating system.
- RecordNow! does not support recording to DVD-RAM discs. To record to a DVD-RAM, use Explorer or other utility.
- When you back up a DVD disc, be sure the source drive supports recording to DVD-R/-RW or DVD+R/+RW discs. If the source drive does not support recording to DVD-R/-RW or DVD+R/+RW discs, it might not be backed up correctly.
- When you back up a DVD-R, DVD-RW, DVD+R or DVD+RW, be sure to use the same type of disc.
- You cannot partially delete any data written to a CD-RW, DVD-RW or DVD+RW disc.

Data Verification

To verify that data is written or rewritten correctly, follow the steps below before you write or rewrite a Data disc.

1. Click the Options button ( ) on the RecordNow! Console to open the Options panels.
2. Select the Data in the left-side menu.
3. Mark the Verify data written to the disc after burning check box in the Data Options.
4. Click the OK button.

DLA for TOSHIBA

Note the following limitations when you use DLA:

- This software supports only rewritable discs (DVD+RW, DVD-RW, and CD-RW). It does not support DVD+R, DVD-R, and CD-R discs that are not rewritable.
- DLA does not support formatting a DVD-RAM disc and writing to it. They are performed by DVD-RAM Driver Software. If DLA Format menu may appear when inserting a DVD-RAM disc into the drive and right-clicking the drive icon in Windows Explorer, please use “DVDForm” to format this disc. You can run “DVDForm” by clicking the start button on the taskbar to display the Start menu and then selecting “All Programs”, “DVD-RAM”, “DVD-RAM Driver” and “DVDForm” sequentially.
- Do not use any discs that have been formatted with packet writing software other than DLA. Similarly, do not use any discs that have been formatted with DLA with any packet writing software other than DLA. When using a disc you are not familiar with, format it by selecting Full Format before using it.
- Do not use the Cut & Paste function for files and folders. A file or folder that has been cut may be lost if writing fails due to an error on the disc.
- When writing the Setup files for the program into a disc formatted by DLA and starting Setup from this disc, an error may occur. In this case, plase copy them to your hard disk and then run Setup.

InterVideo WinDVD Creator 2 Platinum

The InterVideo WinDVD Creator 2 Platinum, is availalbe depending on the model you purchased

Installing WinDVD Creator 2 Platinum

To install the InterVideo WinDVD Creator 2 Platinum, you must logon with administrator rights. Before you install InterVideo WinDVD Creator, close all programs.

1. Insert the Additional Software CD-ROM that contains WinDVD Creator 2 Platinum into your optical disc drive.
2. Follow the installation instructions that appear on the screen.
3. When the installation is complete, restart your computer when prompted for the changes to take effect.

Please refer to the on-line Help for additional InterVideo WinDVD Creator information.

When writing the Setup files for the program into a disc formatted by DLA and starting Setup from this disc, an error may occur. In this case, copy them to your hard disk and then run Setup.

Using WinDVD Creator 2 Platinum

You can record video back to your digital camcorder via i.LINK (IEEE1394) using WinDVD Creator 2 Platinum. However, there is a case where its playback sound is choppy.

1. Click the Windows® start button and select the Control Panel option.
2. Click the Performance and Maintenance icon in the Control Panel.
3. Click the System icon in the Performance and Maintenance window.
4. Click the Advanced tab in the System Properties window.
5. Click the Settings icon in the “Performance” section.
6. Click the Advanced tab in the Performance Options window.
7. Click the Change icon in the “virtual memory” section.
8. Select the Custom size button in the Virtual Memory window.
9. Specify much higher values for “Initial size” and “Maximum size”.
10. Click the Set button in the Virtual Memory window.
11. Click the OK button in the Virtual Memory window.

How to make a DVD-Video

Simplified steps for making a DVD-Video from video data captured from a DV-Camcorder:

1. Click [start]-[All Programs] - [InterVideo WinDVD Creator2]-[InterVideo WinDVD Creator] to launch WinDVD Creator.
2. Click the [Capture] button then capture the video data from the DVCamcorder via IEEE1394.
3. Click the [Edit] button then drag the video clips from [Video Library] tab to the edit track.
4. Click the [Make Movie] button in the top bar.
5. Double Click the Right arrow button icon in the centre of right side.
6. Put a blank DVD-R/+R disc or an erased DVD-RW/+RW disc in the drive.
7. Click [start] to record to the disc.
8. When recording is finished, the tray opens.

Important information for use

Note the following limitations when you write video DVD:

Editing digital video

- Log in with Administrator rights to use WinDVD Creator.
- Make sure that your computer is running on AC power when using WinDVD Creator.
- Operate the computer at Full Power. Do not use power-saving features.
- While you are editing DVD, you can display previews. However, if another application is running, the preview might not display properly.
- WinDVD Creator cannot show video on the RGB (Monitor) when in simultaneous mode.
- WinDVD Creator cannot edit or play copy protected content.
- Do not change display settings while using WinDVD Creator.
- Do not enter standby/hibernation mode while using WinDVD Creator.
- Do not operate WinDVD Creator immediately after turning on the computer. Please wait until all Disc Drive activity has stopped.
- When recording to a DV-Camcorder, to ensure you capture all of your data, let the camcorder record for a few seconds before you begin recording your actual data.
- CD recorder, JPEG functions, DVD-Audio, mini DVD and Video CD functions are not supported in this version.
- While recording video to DVD or tape, please close all other programs.
- Do not run software like a screen saver because it can put a heavy load on the CPU.
- Do not run communication applications like a modem or a LAN.

Before recording the video to DVD

- When you record to DVD disc, please use only discs recommended by the Drive manufacturer.
- Do not set the working drive to a slow device like a USB 1.1 hard disk drive or it will fail to write DVD.
- Do not perform any of the following actions:
  - Operate the computer for any other function, including using a mouse or TouchPad or closing/opening the LCD panel.
  - Bump or cause vibration to the computer.
  - Use the Mode control button and Audio/Video control button to reproduce music or voice.
  - Open the DVD drive.
  - Install, remove or connect external devices, including the following: PC card, SD card, USB devices, external display, i.LINK. devices, optical digital devices.

- Please verify your disc after recording important data.
- DVD-R/+R/-RW disc cannot be written in VR format.
- A maximum of about 2 hours of video data can be written in DVD Video format to DVD-R/+R/-RW/+RW disc.
- WinDVD Creator cannot export to DVD-Audio, VideoCD, miniDVD format.
- WinDVD Creator can write DVD-RAM/+RW in VR format, but the disc may only play on your computer.
- When writing to DVD disc, WinDVD Creator requires 2GB or more over disk space every one hour of video.
- When you make a fully recorded DVD, the chapter sequence may not play correctly.

About Disc Manager

- WinDVD Creator can edit one play list on a disc.
- WinDVD Creator might show a different a thumbnail than you previously set in CE DVD-RAM recorder.
- Using the Disc Manager, you can edit DVD-VR format on DVDRAM, DVD+VR format on DVD+RW, and DVD-Video format on DVD-RW.

About recorded DVDs

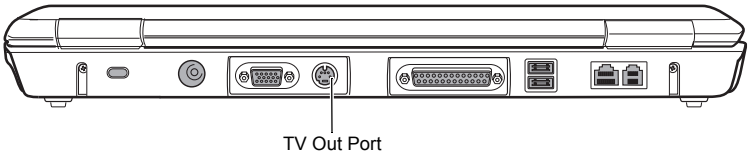
- Some DVD-ROM drives for personal computers or other DVD players may not be able to read DVD-R/+R/-RW/+RW/-RAM discs.
- When playing your recorded disc on your computer, please use the WinDVD software application.
- If you use an over-used rewritable disc, the full formatting might be locked. Please use a brand new disc.

TOSHIBA Virtual Sound

TOSHIBA Virtual Sound works as the audio filter using SRS WOW XT and SRS TruSurround XT functions provided by SRS Labs, Inc. in United States. The audio filter enables you to enjoy the sound and music of better quality on your computer.

TV-Out

Use the TV-Out port to connect to a television. Be sure to use a 4 pin type S-video cable. For more details, see *Appendix B*.



Setting up more than one display

You can set up your computer to utilize more than one display, effectively spreading a single desktop screen across two monitors.

The Display Properties window allows you to adjust more precisely the relative positioning of the two displays when they are configured as an extended desktop. On the Display Properties window, the two displays can be positioned horizontally, vertically or in any diagonal configuration you wish.

If an external display will not be connected next time you use your computer, you should cancel any extended desktop or clone display settings before shutting down your computer.

Clone display settings are those where more than one device has been selected and is simultaneously applicable.

Cleaning the computer

To help ensure long, trouble-free operation, keep the computer free of dust and use care with liquids around the computer.

- Be careful not to spill liquids into the computer. If the computer does get wet, turn the power off immediately and let the computer dry completely before you turn it on again.
- Clean the computer using a slightly damp (with water) cloth. You can use glass cleaner on the display. Spray a small amount of cleaner on a soft, clean cloth and wipe the screen gently with the cloth.

Never spray cleaner directly onto the computer or let liquid run into any part of it. Never use harsh or caustic chemical products to clean the computer.

Media Care

This section provides tips on protecting data stored on your discs and diskettes.

Handles your media with care. The following simple precautions will increase the lifetime of your media and protect the data stored on them:

CDs/DVDs

1. Store your discs in the container they came in to protect them and keep them clean.
2. Do not bend the disc.
3. Do not write on, apply a sticker to, or otherwise mar the surface of the disc that contains data.
4. Hold the disc by its outside edge or the edge on the centre hole. Fingerprints on the surface can prevent the drive from properly reading data.
5. Do not expose to direct sunlight, extreme heat or cold. Do not place heavy objects on your discs.
6. If your discs become dusty or dirty, wipe them with a clean dry cloth. Wipe from the centre out, do not wipe in a circular direction around the disc. If necessary, use a cloth dampened in water or a neutral cleaner. Do not use benzine, thinner or similar cleaner.

Diskettes

1. Store your diskettes in the container they came in to protect them and keep them clean. If a diskette is dirty, do not use cleaning fluid. Clean it with a soft damp cloth.
2. Do not slide back the diskette's protective metal covering or touch the diskette's magnetic surface. Fingerprints may prevent the diskette drive from reading data from the diskette.
3. Data may be lost if the diskette is twisted; bent; or exposed to direct sunlight, extreme heat or cold.
4. Do not place heavy objects on your diskettes.
5. Do not eat, smoke, or use erasers near your diskettes. Foreign particles inside the diskette's jacket can damage the magnetic surface.
6. Magnetic energy can destroy data on diskettes. Keep your diskettes away from speakers, radios, television sets and other sources of magnetic fields.

Moving the computer

The computer is designed for rugged durability. However, a few simple precautions taken when moving the computer will help ensure trouble-free operation.

- Make sure all disk activity has ended before moving the computer. Check the **Built-in Hard Disk Drive** and **optical disc drive** indicators on the computer.
- If a diskette is in the diskette drive, remove it.
- If a disc is in the optical disc drive, remove it. Also make sure the optical disc drive drawer is securely closed.
- Turn off the power to the computer.
- Disconnect all peripherals before moving the computer.
- Close the display. Do not pick up the computer by its display panel or back (where the interface ports are located).
- Close all port covers.
- Disconnect the AC adapter if it is connected.
- Use the carrying case when transporting the computer.

Chapter 5

The Keyboard

The computer's keyboard layouts are compatible with a 101/102-key enhanced keyboard. By pressing some keys in combination, all the 101/102-key keyboard functions can be executed on the computer.

The number of keys on your keyboard depends on which country/region's keyboard layout your computer is configured with. Keyboards for numerous languages are available.

There are five types of keys: typewriter keys, keypad overlay, function keys, soft keys and cursor control keys. The typewriter keys and keypad overlay keys are gray. The other keys are dark gray.

Typewriter keys

The typewriter keys, produce the upper- and lower-case letters, numbers, punctuation marks, and special symbols that appear on the screen.

There are some differences, however, between using a typewriter and using a computer keyboard:

- Letters and numbers produced in computer text vary in width. Spaces, which are created by a space character may also vary depending on line justification and other factors.
- The lowercase l (el) and the number 1 (one) are not interchangeable on computers as they are on a typewriter.
- The uppercase O (oh) and the 0 (zero) are not interchangeable.
- The **Caps Lock** function key locks only the alphabetic characters in uppercase while the shift lock on a typewriter places all keys in the shifted position.
- The **Shift** keys, the **Tab** key, and the **BkSp** (backspace) key perform the same function as their typewriter counterparts but also have special computer functions.

F1 ... F12 function keys

The function keys, not to be confused with Fn, are the 12 keys at the top of your keyboard. These keys are dark gray, but function differently from the other dark gray keys.

F1 through **F12** are called function keys because they execute programmed functions when pressed. Used in combination with the **Fn** key, keys marked with icons execute specific functions on the computer. See the section, *Soft keys: Fn key combinations*, in this chapter. The function executed by individual keys depends on the software you are using.

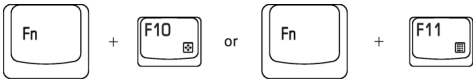
Soft keys: Fn key combinations

The **Fn** (function) is unique to TOSHIBA computers and is used in combination with other keys to form soft keys. Soft keys are key combinations that enable, disable or configure specific features.

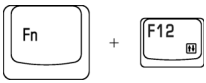
Some software may disable or interfere with soft-key operations. Soft-key settings are not restored by the Standby feature.

Emulation keys

Your software may require you to use keys that the keyboard does not have. Pressing the **Fn** key and one of the following keys simulates the enhanced keyboard's functions.

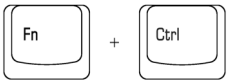


Press **Fn + F10** or **Fn + F11** to access the integrated keypad. When activated, the gray keys with white numbers become numeric keypad keys (**Fn + F11**) or cursor control keys (**Fn + F10**). Refer to the *Keypad overlay* section in this chapter for more information on how to operate these keys. The power on default for both settings is off.



Press **Fn + F12** (**ScrLock**) to lock the cursor on a specific line. The power on default is off.

Press **Fn + Enter** to simulate **Enter** on the enhanced keyboard's numeric keypad.



Press **Fn + Ctrl** to simulate the enhanced keyboard's right **Ctrl** key.

Hotkeys

Fn + ESC	**Volume Mute** Turns the volume on and off.
Fn + F1	**Instant Security** Enters screen saver mode and blanks the screen. To restore your desktop, press any key or use the TouchPad.
Fn + F2	**Power Save Modes** Displays the power save modes and lets you change the power settings
Fn + F3	**Standby** This hot key switches the system to Standby mode.
Fn + F4	**Hibernate** This hot key switches the system to Hibernate mode.
Fn + F5	**Display Selection** Changes displays.

Default resolution for simultaneous mode is set to XGA (1024x768). If you connect an RGB (Monitor) that is not XGA resolution, change it in "Display Properties".

Fn + F6	**Brightness Down**
Fn + F7	**Brightness Up**
Fn + F8	**Wireless Device Controls** Pressing this hot key allows you to switch between active wireless devices. Only works if the wireless switch has already been turned on.
Fn + F9	**TouchPad On/Off**
Fn + F10	**Cursor Keypad On/Off** This hot key enables/disables the embedded cursor keypad. Numeric lock state is logically disabled. See chapter 3 for more information.

	Fn + F11	**Numeric Keypad On/Off** This hot key enables/disables the embedded numeric keypad. Numeric lock state is logically enabled. See chapter 3 for more information.
	Fn + F12	**Scroll Lock On/Off**
	Fn + Space	**Change Resolution** Cycles sequentially from the current resolution to 800x600 to 1024x768 and back again to the original resolution.
	Fn + 1	**Zoom Out** To enlarge the icon size on the desktop or the application window, press the 1 key while holding down the Fn key.
	Fn + 2	**Zoom In** To reduce the icon size on the desktop or the application window, press the 1 key while holding down the Fn key.

Before using Fn+1 and Fn+2, you must install the TOSHIBA Zooming Utility. The Utility only supports the following application windows: Microsoft Internal Explorer, Microsoft Office, Windows Media Player, Adobe Reader and the icons on the desktop.

Windows special keys

The keyboard provides two keys that have special functions in Windows XP. One activates the start menu and the other has the same function as the secondary mouse button.

This key activates the Windows XP start menu

This key has the same function as the secondary mouse button.

Keypad overlay

Your computer's keyboard does not have an independent numeric keypad, but its numeric keypad overlay functions like one.

The keys in the center of the keyboard with white letters make up the numeric keypad overlay. The overlay provides the same functions as the numeric keypad.

Turning on the overlays

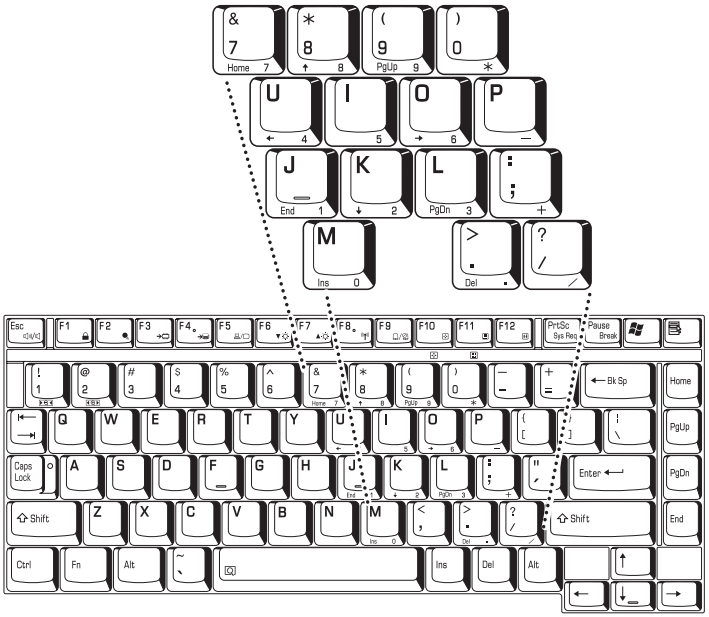
The numeric keypad overlay can be used for numeric data input or cursor and page control.

Arrow mode

To turn on the Arrow mode, press **Fn + F10** (**Arrow mode** indicator lights). Now try cursor and page control using the keys shown in figure 5-2. Press **Fn + F10** again to turn off the overlay.

Numeric mode

To turn on the Numeric mode, press **Fn + F11** (**Numeric mode** indicator lights). Now try numeric data entry using the keys below. Press **Fn + F11** again to turn off the overlay.



The numeric keypad overlay (U.S.)

Temporarily using normal keyboard (overlay on)

While using the overlay, you can temporarily access the normal keyboard without turning off the overlay:

1. Hold down **Fn** and press any other key. All keys will operate as if the overlay were off.
2. Type upper-case characters by holding down **Fn + Shift** and pressing a character key.
3. Release **Fn** to continue using the overlay.

Temporarily using overlay (overlay off)

While using the normal keyboard, you can temporarily use the keypad overlay without turning it on:

1. Press and hold down **Fn**.
2. Check the keyboard indicators. Pressing **Fn** turns on the most recently used overlay. If the **Numeric mode** indicator lights, you can use the overlay for numeric entry. If the **Arrow mode** indicator lights, you can use it for cursor and page control.
3. Release **Fn** to return to normal keyboard operation.

Temporarily changing modes

If the computer is in **Numeric mode**, you can switch temporarily to **Arrow mode** by pressing a shift key.

If the computer is in **Arrow mode**, you can switch temporarily to **Numeric mode** by pressing a shift key.

Generating ASCII characters

Not all ASCII characters can be generated using normal keyboard operation. But, you can generate these characters using their ASCII codes.

With the overlay on:

1. Hold down **Alt**.
2. Using the overlay keys, type the ASCII code.
3. Release **Alt**, and the ASCII character appears on the display screen.

With the overlay off:

1. Hold **Alt + Fn**.
2. Using the overlay keys, type the ASCII code.
3. Release **Alt + Fn**, and the ASCII character appears on the display screen.

Chapter 6

Power and Power-Up Modes

The computer's power resources include the AC adapter and internal batteries. This chapter gives details on making the most effective use of these resources including charging and changing batteries, tips for saving battery power, and power up modes.

Power conditions

The computer's operating capability and battery charge status are affected by the power conditions: whether an AC adapter is connected, whether a battery is installed and what the charge level is for the battery.

		Power on	Power off (no operation)
AC adapter connected	Battery fully charged	• Operates • No charge • LED: **Battery** green **DC IN** green	• No charge • LED: **Battery** green **DC IN** green
	Battery partially charged	• Operates • Charge • LED: **Battery** Amber **DC IN** green	• Charge • LED: **Battery** Amber **DC IN** green
	No battery installed or no charge	• Operates • No charge • LED: **Battery** off **DC IN** green	• No charge • LED: **Battery** off **DC IN** green

		Power on	Power off (no operation)
AC adapter not connected	Battery capacity is above low battery trigger point	• Operates • LED: **Battery** off **DC IN** off	
	Battery capacity is below low battery trigger point	• Operates • Alarm sounds (depending on the Low Battery Alarm itemof CMOS SETUP menu & TOSHIBA Power Saver setting) • LED: **Battery** flashes amber **DC IN** off	
	Battery capacity exhausted	Computer goes into Hibernation or shuts down (depending on the TOSHIBA Power Saver setting)	
	No battery installed	• No operation • LED: **Battery** off **DC IN** off	

Power indicators

As shown in the above table, the **Battery**, **DC IN** and **Power** indicators on the system indicator alert you to the computer's operating capability and battery charge status.

Battery indicator

Check the **Battery** indicator to determine the status of the battery. The following indicator lights indicate the battery status.

Flashing amber	The battery charge is low. The AC adapter must be connected to recharge the battery
Amber	Indicates the AC adapter is connected and charging the battery.
Green	Indicates the AC adapter is connected and the battery is fully charged.
No light	Under any other conditions, the indicator does not light.

DC IN indicator

Check the **DC IN** indicator to determine the power status with the AC adapter connected:

Green	Indicates the AC adapter is connected and supplying proper power to the computer.
No light	Indicates the AC adapter is not connected.

Power indicator

Check the **Power** indicator to determine the power status with the AC adapter connected:

Blue/Green	The power button will shinning blue while power is being supplied to the computer and the computer is turned on. The power indicator in front of computer will shinning green while system is on.
Blinking amber	Indicates power is being supplied to the computer while the computer is in Standby mode.
No light	Under any other conditions, the indicator does not light.

Battery types

The computer has two types of batteries:

- Battery pack
- Real Time Clock (RTC) battery

Battery pack

When the AC adapter is not connected, the computer's main power source is a removable lithium ion battery pack, also referred to in this manual as the battery.

You can purchase additional battery packs for extended use of the computer away from an AC power source.

The battery is a disposable item. When its operation becomes short even when fully charged, replace it with a new one.

- *The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by TOSHIBA as replacements.*
- *Do not remove the Battery Pack while the computer is in Standby mode. Data is stored in RAM, so if the computer loses power, it will be lost.*
- *Battery type (depending on the model purchased): PA3395U-1BAS/PA3395U-1BRS*

Real Time Clock battery

The Real Time Clock (RTC) battery provides power for the internal real time clock and calendar. It also maintains the system configuration.

If the RTC battery becomes completely discharged, the system loses this data and the real time clock and calendar stop working. The following message appears when you turn on the power:

```
ERROR 0271:Check date and time settings.
WARNING 0251:System CMOS checksum bad -
Default configuration used.
Press <F1> to resume, <F2> to Setup.
```

The computer's RTC battery is a lithium battery and should be replaced only by your dealer or by a TOSHIBA service representative. The battery can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations.

When this error appears, the following action is recommended.

1. Plug in AC over 24 hours.
2. Press F2 to enter BIOS setup menu.
3. Set correct time and date.

If you still see error message after above action, please get contact with TOSHIBA service.

Care and use of the battery pack

The battery pack is a vital component of portable computing. Taking proper care of it will help ensure longer operating time on battery power as well as a longer life for your battery pack. Follow the instructions in this section carefully to ensure safe operation and maximum performance.

Safety precautions

Mishandling of batteries can cause death, serious injury or property damage.

Carefully observe the following advisories:

Danger: Indicates an imminently hazardous situation, which could result in death or serious injury, if you do not follow instructions.

Warning: Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

Caution: Indicates a potentially hazardous situation, which if not avoided, may result in moderate or minor injury or property damage.

Note: Provides important information.

Danger

1. Never try to dispose of the battery pack by burning or expose it to a heating device such as a microwave oven. The battery pack could explode and cause bodily injury.
2. Never try to disassemble, repair or otherwise tamper with a battery pack. The battery pack will overheat and ignite. Leakage of caustic alkaline solution or other electrolytic substances will cause fire or injury, possibly resulting in death or serious injury.
3. Never short-circuit the battery pack by contacting the terminals with a metal object. A short-circuit can cause fire or otherwise damage the battery pack and possibly cause injury. To avoid accidental short-circuit, always wrap the battery pack in plastic and cover the terminals with electrical tape when storing or disposing of the battery pack.
4. Never puncture the battery pack with a nail or other sharp object. Never strike it with a hammer or other object. Never step on it.
5. Never try to charge the battery pack in any manner other than that described in the user's manual. Never connect the battery pack to a plug socket or to an automobile's cigarette lighter socket. It may rupture or ignite.
6. Use only the battery pack supplied with the computer or other device or an battery pack approved by the computer or device's manufacturer. Battery packs have different voltages and terminal polarities. Use of an improper battery could cause smoke, fire or rupture of the battery pack.
7. Never subject a battery pack to heat, such as storage near a heat source. Exposure to heat can cause the battery pack to ignite, explode or leak caustic liquid and cause death or serious injury. It could also fail or malfunction causing data loss.

8. Never expose the battery pack to abnormal shock, vibration or pressure. The battery pack's internal protective device will fail, causing it to overheat, explode, ignite or leak caustic liquids possibly resulting in death or serious injury.
9. Never let a battery pack become wet. A wet battery pack will overheat, ignite or rupture possibly resulting in death or serious injury.

Warning

1. Never allow caustic electrolyte fluid leaked from a battery pack to contact your eyes, skin or clothing. If caustic electrolyte fluid should contact your eyes, immediately wash your eyes with large amounts of running water and seek medical attention, to help prevent eye damage. It electrolyte fluid should contact your skin, immediately wash it under running water to prevent rash. If it contacts your clothes, promptly remove them to prevent the fluid from contacting your skin or eyes.
2. Immediately turn off the power, disconnect the AC adapter and remove the battery if any of the following events are observed in the battery pack: offensive or unusual odor, excessive heat, discoloration or deformation. Never use the computer again until it has been checked by a TOSHIBA service provider. It might generate smoke or fire, or the battery pack might rupture.
3. Make sure the battery is securely installed in the computer before attempting to charge the battery pack. Improper installation could generate smoke or fire, or cause the battery pack to rupture.
4. Keep the battery pack out or reach of infants and children. It can cause injury.

Caution

1. Never continue to use a battery pack after its recharging capacity has become impaired, or after the display of a warning message indicating that the battery pack's power is exhausted. Continued use of an exhausted or impaired battery pack could cause the loss of data.
2. Never dispose of battery packs with normal trash. Bring them to your TOSHIBA dealer or to another recycling centre to save resources and prevent environmental damage. Cover the terminals with electrical tape to prevent short-circuits, which could cause the battery pack to ignite or rupture.
3. Use only battery packs recommended by TOSHIBA as replacements.
4. Always make sure the battery pack is installed correctly and securely. Otherwise, a battery pack could fall out and possibly cause injury.
5. Charge the battery pack only in an ambient temperature between 5 and 30 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate and the battery life might be shortened.

6. Be sure to monitor the remaining battery power. If the battery pack and real time clock battery discharge completely, Standby and Suspend will not function and data in memory will be lost. Also, the computer might register an incorrect time and date. In this case, connect the AC adapter to recharge the batteries.
7. Never install or remove the battery pack without first turning off the power and disconnecting the AC adapter. Never remove the battery pack while the computer is in Suspend or Standby mode. Data will be lost.

Note

1. Never remove the battery pack while the Wake-up on LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on LAN function.
2. To ensure the battery pack maintains maximum capacity, operate the computer on battery power once a week until the battery pack is fully discharged. Refer to the section Extending battery life in this chapter for procedures. If the computer is continuously operated on AC power for an extended period, more than a week, the battery might fail to retain a charge. It might not function efficiently over the expected life of the battery pack and the Battery indicator might not indicate a low-battery condition.
3. After the battery pack is charged, avoid leaving the AC adapter connected and the computer turned off for more than a few hours at a time. Continuing to charge a fully charged battery pack can damage the battery.

Charging the batteries

When the power in the battery pack becomes low, the **Battery** indicator flashes amber indicating that only a few minutes of battery power remain. If you continue to use the computer while the **Battery** indicator flashes, the computer enables Hibernation mode (so you don't lose data) and automatically turns off.

You must recharge a battery pack when it becomes discharged.

Procedures

To recharge a battery pack while it is installed in the computer, connect the AC adapter to the **DC IN** socket and plug the other end into a working outlet.

The **Battery** indicator glows amber when the battery is being charged.

Use only the computer connected to an AC power source to charge the battery pack. Do not attempt to charge the battery pack with any other charger.

Time

The following table shows the time required to fully charge a discharged battery.

Charging time (hours)

Battery type	Power on	Power off
Battery pack	about 12 or longer	about 4 or longer
RTC battery	about 24	about 24 with AC or Battery pack

The charging time when the computer is on is affected by ambient temperature, the temperature of the computer and how you use the computer.

If you make heavy use of external devices, for example, the battery might scarcely charge at all during operation. Refer also to the section Maximizing battery operating time. The same factors affect charge time.

Battery charging notice

The battery may not charge right away under the following conditions:

- The battery is extremely hot or cold. To make sure the battery charges to its full capacity, charge the battery at room temperature of 10° to 30°C (50° to 86°F).
- The battery is nearly completely discharged. Leave the AC adapter connected for a few minutes and the battery should begin charging.

Once a battery pack is fully charged, it is recommended that you operate the computer only on battery power until the battery pack completely discharges. Doing so extends battery life and helps ensure accurate monitoring of battery capacity.

The **Battery** indicator may show a rapid decrease in battery operating time when you try to charge a battery under the following conditions:

- The battery has not been used for a long time.
- The battery has completely discharged and been left in the computer for a long time.
- A cool battery is installed in a warm computer.

In such case, follow the steps below.

1. Fully discharge the battery by leaving it in the computer with the power on until the power automatically shuts off.
2. Plug in the AC adapter.
3. Charge the battery until the Battery indicator glows green.

Repeat these steps two or three times until the battery recovers normal capacity.

Leaving the AC adapter connected will shorten battery life. At least once a month, run the computer on battery power until the battery is fully discharged, then recharge the battery.

Monitoring battery capacity

Remaining battery power can be monitored by the TOSHIBA Power Saver. Refer to Utilities in Chapter 1, *Introduction*.

- *Wait for a moment after turning on the computer before trying to monitor the remaining operating time. The computer needs this time to check the battery's remaining capacity.*
- *With repeated discharges and recharges, the battery's capacity will gradually decrease. Therefore, an often used, older battery will not operate for as long as a new battery even when both are fully charged.*

Maximizing battery operating time

A battery's usefulness depends on how long it can supply power on a single charge.

How long the charge lasts in a battery depends on:

- How you configure the computer (for example, whether you enable battery power saving options). The computer provides a battery save mode to conserve battery power. This mode has the following options:
  - Display auto off
  - Hard Disk Drive auto off
  - System auto off
  - LCD brightness
- How often and how long you use the hard disk, CD-ROM and the diskette drive (if one is connected).
- How much charge the battery contained to begin with.
- How you use optional devices, such as a PC Card, to which the battery supplies power.
- Enabling Resume mode conserves battery power if you are frequently turning the computer off and on.
- Where you store your programs and data.
- Closing the display when you are not using the keyboard saves power.
- Operating time decreases at low temperatures.
- The condition of the battery terminals. Make sure the battery terminals stay clean by wiping them with a clean dry cloth before installing the battery pack.

Retaining data with power off (standby mode)

When you turn off your computer with fully charged batteries, the batteries retain data for the following approximate time periods:

Battery	Approximately 1.5 days (Standby mode) Approximately 1 month (Shut down mode)
RTC battery	Approximately 1 month

Extending battery life

To maximize the life of your battery pack:

- If you have extra battery packs, rotate their use.
- If you will not be using the system for an extended period, remove the battery pack.
- Store spare battery packs in a cool dry place out of direct sunlight.

Replacing the battery pack

When the battery pack reaches the end of its operating life you will need to install a new one. If the **Battery** indicator flashes amber shortly after the battery has been fully recharged, the battery pack needs to be replaced.

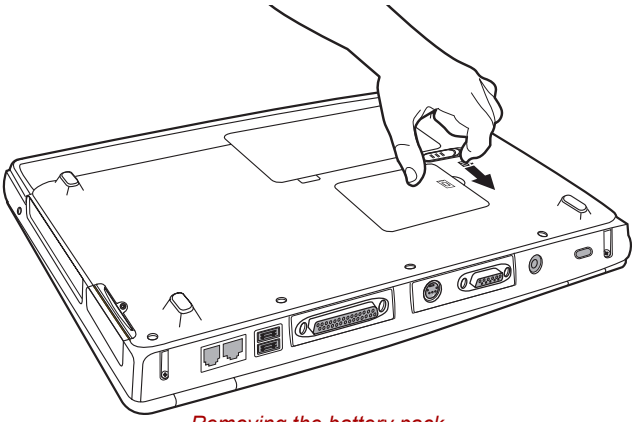
You might also replace a discharged battery pack with a charged spare when you are operating your computer away from an AC power source. This section explains how to remove and install the battery pack.

Removing the battery pack

To replace a discharged battery pack, follow the steps below.

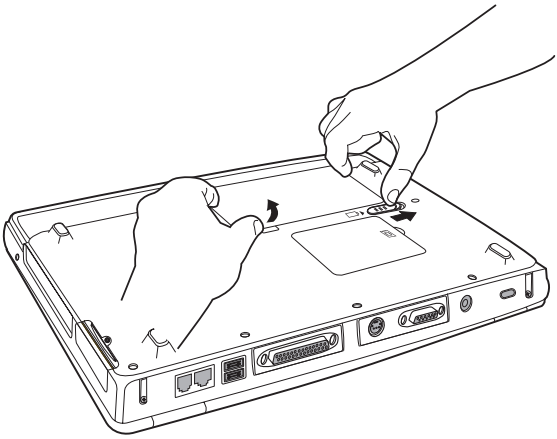
- *When handling battery packs, be careful not to short circuit the terminals. Also do not drop, hit or otherwise apply impact; do not scratch or break the casing and do not twist or bend the battery pack.*
- *Do not remove the battery pack while the computer is in Standby mode. Data in memory will be lost.*

1. Save your work.
2. Turn the computer's power off. Make sure the Power indicator is off.
3. Remove all cables connected to the computer.
4. Turn the computer upside down.
5. Release the battery pack lock.



Removing the battery pack

6. Slide the battery pack latch, then pull the battery out of the bay.



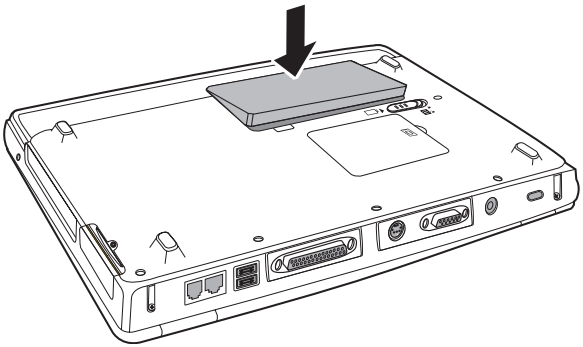
Removing the battery pack

Installing the battery pack

To install a battery pack, follow the steps below.

The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by TOSHIBA as replacements.

1. Turn the computer's power off.
2. Disconnect all cables connected to the computer.
3. Hold the battery pack so that the label faces down and the connectors on the battery face the connectors on the computer.
4. Gently press the battery into the battery bay until the latch clicks into place.



Installing the battery pack

TOSHIBA Password Utility

The TOSHIBA Password Utility provides two levels of password security: User and Supervisor.

Passwords set in TOSHIBA Password Utility are different from the Windows® login password.

User Password

To start the utility, point to or click the following items:

`Launch TOSHIBA Assist → SECURE → User Password`

- **Registered**

  Click to register a password of up to 8 characters. After a password is set, you will be prompted to enter it when you start the computer.

- **Not Registered**

  Click to delete a registered password. Before you can delete a password, you must first enter the current password correctly.

- **Owner String** (text box)

  You can use this box to associate text with the password. After you enter text, click **Apply** or **Ok**. At the time of a startup of a computer, this text is displayed, when you can ask for the input of a password.

Supervisor password

If you set a supervisor password, some functions might be restricted when a user logs on with the user password. To set a supervisor password,

`TOSHIBA Assist → SECURE → Supervisor password`

This utility lets you do the following:

- Register or delete the supervisor password.
- Specify restrictions for general users.

Starting the computer by password

If you registered a password, start the computer by entering the password manually.

The password is necessary only if the computer was shut down in boot mode, not in Hibernation or Standby mode.

To enter a password manually, follow these steps:

1. Turn on the power as described in Chapter 3, *Getting Started*. The following message will appear in the LCD:

   `Enter Password [xxxxxxxx]`

2. Enter the Password.
3. Press **Enter**.

If you enter the password incorrectly three consecutive times, the computer shuts down. You must turn on the computer again and re-enter the password.

Power-up modes

The computer has three power-up modes:

- Hibernation (saves data in memory to the hard disk)
- Standby (Power remains on, saving data in RAM, but the CPU and all other devices enter sleep mode.)
- Boot (does not save data in memory)

Refer also to the section Turning off the power in Chapter 3, Getting Started.

Panel power off/on

In AC mode, this feature turns power to the computer off when the display panel is closed and turns it back on when the panel is opened.

In Battery mode, the Hibernation feature turns power to the computer off when the display panel is closed and cannot turn it back on when the panel is opened. The Standby feature turns power to the computer off when the display panel is closed and turns it back on when the panel is opened.

If the panel power off function is enabled and you use Shut down Windows, do not close the display until the shut down function is completed.

System automatic Standby/Hibernation

This feature automatically turns off the system in Standby or Hibernation mode if the computer is not used for a set duration.

Refer to Special Features, in Chapter 1, *Introduction* for an explanation of how to set the duration.

Chapter 7

HW Setup

This chapter explains how to use TOSHIBA HW Setup program to configure your computer. TOSHIBA HW Setup lets you configure settings for General, Display, Boot Priority, Keyboard, CPU, LAN, and USB.

Some models are not equipped with Parallel/Printer tab and/or CPU tab.

Accessing HW Setup

To run HW Setup, click **start**, click **Control Panel**, click Printers and Other Hardware and select **TOSHIBA HW Setup**.

HW Setup Window

Th HW Setup window contains the following tabs: General, Display, Boot Priority, Keyboard, CPU, LAN, Device Config, Parallel/Printer and USB.

There are also these three buttons:

OK	Accepts your changes and closes the HW Setup window.
Cancel	Closes the window without accepting your changes.
Apply	Accepts all your changes without closing the HW Setup window.

General

This window displays the BIOS version and contains two buttons:

Default	Return all HW Setup values to the factory settings.
About	Display the HW Setup version.

Setup

This field displays BIOS Version and date.

Password

This tab allows you to set or reset the user password for power on.

Parallel/Printer

Some models are equipped with Parallel/Printer tab. This tab lets you set the Parallel Port Mode. Use the Windows® Device Manager to make settings for the Parallel port.

Parallel Port Mode

The options in this tab are ECP and Standard Bi-directional.

ECP	Sets the port type to Extended Capabilities Port (ECP). For most printers, the port should be set to ECP (Default).
Standard **Bi-directional**	This setting should be used with some other parallel devices.

Display

This tab lets you customize your computer's display settings for either the internal LCD screen or for an external monitor.

Power On Display

Lets you use the display to be used when the computer is booted (This setting is only available on Standard VGA mode and not available on Windows® Desktop).

Auto-Selected	Selects an external monitor if one is connected. Otherwise, it selects the internal LCD (Default).
LCD + Analog RGB	Selects both the internal LCD and external monitor for simultaneous display.

CPU

This function lets you set the CPU operating mode.

It is displayed in Pentium-M model only.

Dynamic CPU Frequency Mode

This option lets you choose from the following settings:

Dynamically Switchable	CPU power consumption and clock speed automatic switching function is enabled. When the computer is in use, CPU operation is automatically switched when necessary (Default).
Always Low	CPU power consumption and clock speed automatic switching function is disabled. The CPU always runs at low power consumption and low speed.

Boot Priority

Boot Priority Options

This option sets the priority for booting the computer.

You can override the settings and manually select a boot device by pressing one of the following keys while the computer is booting:

U	Selects the USB floppy disk drive.
N	Selects the Network.
C	Selects optical device.

FDD is looked for when the boot disk is contained in external hard disk drive.

To select the boot drive you want, follow the steps below.

1. Boot-up your computer and press **F12** to enter the boot menu.
2. The boot select screen will be displayed: Hard Disk Drive, CD/DVD, FDD, and LAN.
3. Use the upper/lower cursor keys to highlight the boot device you want and press **Enter**.

Keyboard

Wake-up on Keyboard

When this feature is enabled and the computer is in Standby mode, you can turn on the computer by pressing any key. It is effective only for the internal keyboard and only when the computer is in standby mode.

Enabled	Enables the Wake-up on Keyboard.
Disabled	Disables the Wake-up on Keyboard (Default).

The Wake-up on LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.

Do not install or remove an optional memory module while Wake-up on LAN is enabled.

USB

Legacy USB Support

Use this option to enable or disable Legacy USB support. If your operating system does not support USB, you can still use a USB mouse, keyboard, and FDD by setting the Legacy USB Support to enable.

LAN

Wake-up on LAN

This feature lets the computer's power be turned on when it receives a wake-up signal from the LAN.

Enabled	Enables Wake-up on LAN.
Disabled	Disables Wake-up on LAN (Default).

Built-in LAN

This feature enables or disables the Built-in LAN.

Enabled	Enables Built-in LAN function (Default).
Disabled	Disables Built-in LAN function.

Chapter 8

Optional Devices

Optional devices can expand the computer's capabilities and its versatility. This chapter describes connection or installation of the following types of devices, which are available from your TOSHIBA dealer:

Cards/Memory

- PC cards
- SD (Secure Digital) / MMC (MultiMediaCard) / SM (SmartMedia) / MS (Memory Stick) /MS Pro (Memory Stick Pro) / xD (xD-Picture Card) cards
- Memory modules

Power devices

- Battery pack
- AC adapter

Peripheral devices

- Parallel printer
- External monitor
- Television
- i.LINK (IEEE1394)
- Security lock

PC Card

The computer is equipped with a PC Card expansion slot that can accommodate one 5 mm Type II card. Any PC Card that meets industry standards (manufactured by TOSHIBA or other vendor) can be installed. The slots support 16-bit PC Cards, including PC Card 16's multifunction card and CardBus PC Cards. CardBus supports the new standard of 32-bit PC cards. The bus provides superior performance for the greater demands of multimedia data transmission.

- *A Hard Disk Drive or CD-ROM connected to a 16-bit PC Card might affect the performance of the computer's sound system and data transmission, including slower transmission speeds and dialing errors.*

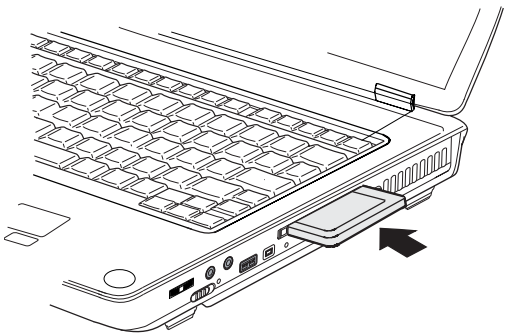
Installing a PC card

One PC Card connector is located on the right side of the computer. The computer's hot-install feature lets you install PC Cards while the computer's power is on.

Do not install a PC Card while the computer is in Standby or Hibernation mode. Some Cards might not work properly.

To install a PC Card, follow the steps below.

1. Insert the PC Card.
2. Press gently to ensure a firm connection.

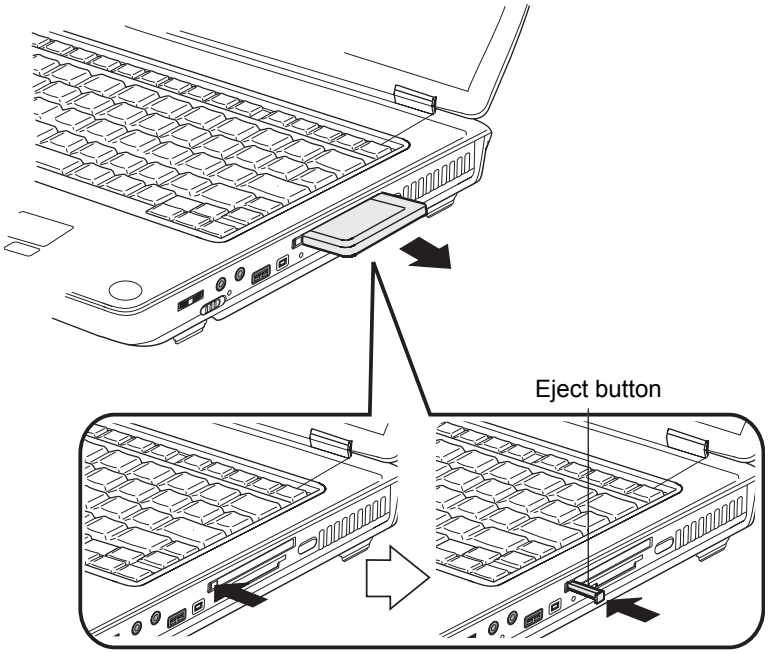


Installing a PC card

After installing the card, refer to the card's documentation and check the configuration in Windows® to make sure it is appropriate for your card.

Removing a PC card

1. Click the **Safely Remove Hardware** icon on the Task Bar.
2. Click the PC Card you want to remove.
3. Press the eject button of the PC Card to extend it.
4. Press the extended eject button to pop the card out slightly.
5. Grasp the PC Card and remove it.



Removing a PC card

SD/MMC/SM/MS/MS Pro/xD Memory cards

The computer is equipped with a multiple digital media card slot that can accommodate SD/MMC/SM/MS/MS Pro/xD memory cards. These memory cards let you easily transfer data from devices, such as digital cameras and Personal Digital Assistants, which use flash-memory.

Card Type	Capacities
SD	8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB
MMC	8MB, 16MB, 32MB, 64MB, 128MB, 256MB
SM	2MB, 4MB, 8MB, 16MB, 32MB, 64MB, 128MB
MS	8MB, 16MB, 32MB, 64MB, 128MB, 256MB
MS Pro	256MB, 512MB, 1GB
xD	8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB

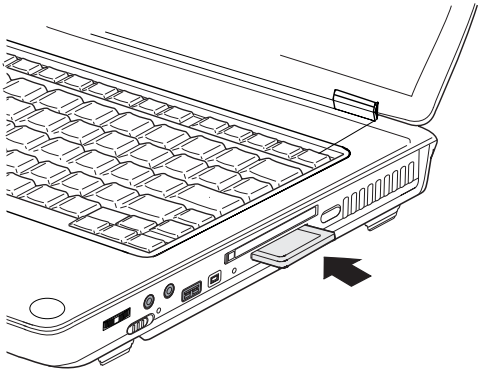
Keep foreign objects out of the memory card slot. A pin or similar object can damage the computer's circuitry.

Do not format memory cards with Windows®. It might result in memory cards that cannot be used with peripheral devices.

Installing a memory card

To install a memory card:

1. Insert the memory card.
2. Press gently to ensure a firm connection.



Inserting a memory card

Be sure the memory card is oriented properly before you insert it.

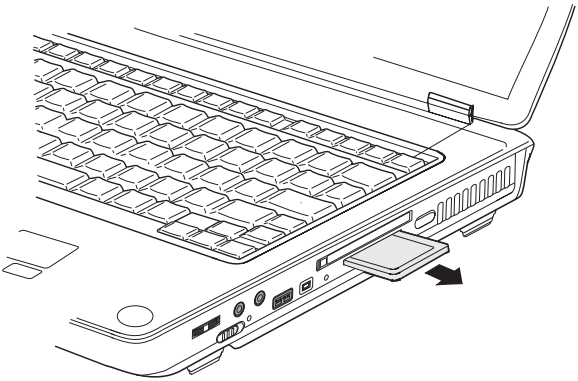
If Windows® fails to read the card, remove it then reinsert it.

- *Two kinds of cards will not work at the same time. Insert only one card when using Multiple Digital media card Slot.*
- *5V Smartmemory card is not supported.*
- *Memory Stick Duo/ Memory Stick Pro Duo/ Mini-SD card is not supported.*

Removing a memory card

To remove a memory card, follow the steps below.

1. Click the **Safely Remove Hardware** icon on the Task Bar.
2. Stop a memory card device
3. Grasp the card and remove it.



Removing a memory card

- *Make sure the memory card indicator is out before you remove the card or turn off the computer's power. If you remove the card or turn off the power while the computer is accessing the card you may lose data or damage the card.*
- *Do not remove the card while the computer is in Standby or Hibernation mode. The computer could become unstable or data in the memory card could be lost.*
- *Do not turn off or make computer in Standby or Hibernation mode during data is being transferred. The computer could become unstable or data in the memory card would be lost.*

Memory card care

Set the write-protect switch to the lock position, if you do not want to record data.

1. Do not write to a memory card if the battery power is low. Low power could affect writing accuracy.
2. Do not remove a memory card while read/write is in progress.
3. The memory card is designed so that it can be inserted only one way. Do not try to force the card into the slot.
4. Do not leave a memory card partially inserted in the slot. Press the memory card until you hear it click into place.
5. Do not twist or bend memory cards.
6. Do not expose memory cards to liquids or store in humid areas or lay media close to containers of liquid.
7. After using a memory card, return it to its case.
8. Do not touch the metal part or expose it to liquids or let it get dirty.

Memory expansion

You can install additional memory in the computer's memory module socket to increase the amount of RAM. This section describes how to install and remove a memory module.

- *Before you install or remove a memory module, turn off the computer with the Shut Down option in the Windows start menu. If you install or remove a memory module while the computer is in Standby or Hibernation mode, data will be lost.*
- *Some memory modules can be physically installed but are not compatible with the computer. In this case the computer will issue a warning.*

  ***TOSHIBA M40X Series:** There will be a long beep, 3 short beeps, 3 more short beeps and then a long beep when you turn the power on. In this case, shut down the power and remove the incompatible memory module.*

  ***CAUTION:** If you want to upgrade system memory, you should only use certified modules. Ask your vendor or check the TOSHIBA web site for a list of approved memory products.*

Installing a memory module

If you use the computer for a long time, the memory modules will become hot. In this case, let the memory modules cool to room temperature before you replace them.

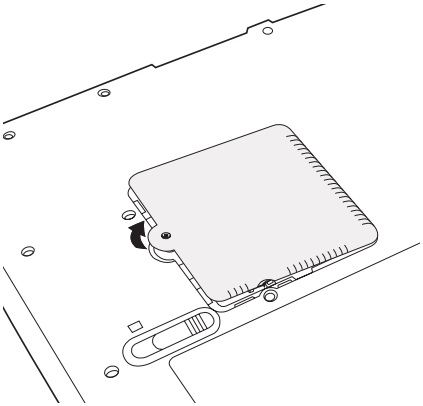
Follow these steps to install a memory module:

1. Set the computer to boot mode and turn off the power.

Do not try to install a memory module under the following conditions. You can damage the computer and the module.

   a. *The computer is turned on.*
   b. *The computer was shut down using the Stand by mode.*
   c. *Power to the optical disc drive has been turned on by the CD Power switch.*

2. Remove all cables connected to the computer.
3. Turn the computer upside down and remove the battery (refer to Chapter 6, *Power and Power-Up Modes*).
4. Loosen the one screw securing the memory module socket cover.
5. Slide your fingernail or a thin object under the cover and lift it off.

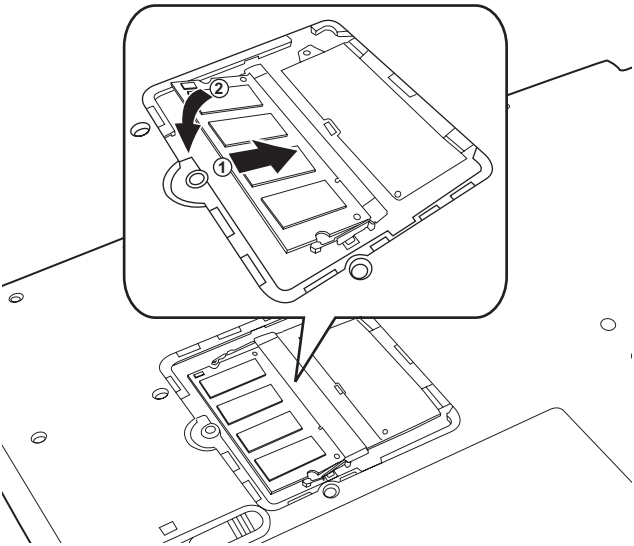


Removing the memory module socket cover

6. Fit the module's connectors into the computer's connectors at about a 45 degree angle and press the module carefully to ensure a firm connection.

Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.

7. Push the module down so it lies flat. Latches on either side will click into place to secure the module.



Installing a module

8. Seat the cover and secure it with the screw.
9. Replace the battery pack as described in Chapter 6, *Power and Power-Up Modes*.
10. Turn the power on and make sure the added memory is recognized.

Removing a memory module

If you use the computer for a long time, the memory modules will become hot. In this case, let the memory modules cool to room temperature before you replace them.

To remove the memory module, make sure the computer is in boot mode then:

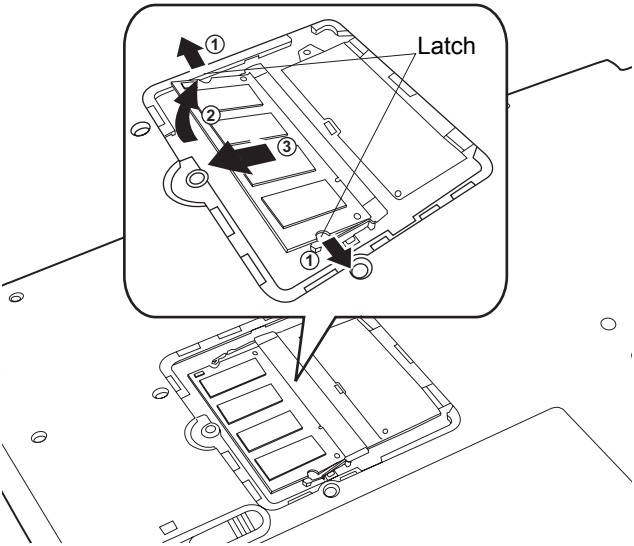
1. Be sure the power is off and all cables are disconnected from the computer.

Do not try to remove a memory module with the computer turned on. You can damage the computer and the module.

2. Turn the computer upside down and remove the battery and loosen the screw securing the memory module socket cover.
3. Slide your fingernail or a thin object under the cover and lift it off.
4. Push the latches to the outside to release the module. A spring will force one end of the module up.

5. Grasp the module and pull it out.

Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.



Removing the memory module

6. Seat the cover and secure its screw.
7. Replace the battery.

Additional battery pack

You can increase the portability of the computer with additional battery packs. If you're away from an AC power source and your battery runs low, you can replace it with a freshly charged battery. See Chapter 6, *Power and Power-Up Modes*.

Additional AC adapter

If you frequently carry the computer to different sites such as your home and office, having an AC adapter at each location reduces the weight and bulk of your load.

Parallel printer

You can connect any standard Centronics-compatible parallel printer to your computer. All you need is a parallel printer cable. Your dealer can supply one or you can purchase one at most computer stores.

The cable's connectors are designed so that it is impossible for you to connect them incorrectly. To connect a printer, follow these steps:

1. Turn off the computer.
2. Insert one end of the cable into the computer's parallel port.
3. Tighten the screws that fasten the cable connector to the computer's parallel port.
4. Insert the other end of the cable into the printer's parallel connector.
5. Fasten the connector to the printer with the clips on the parallel port.
6. Turn on the printer.
7. Turn on the computer.
8. Windows XP may automatically recognize the printer and you can begin printing immediately. If it doesn't, install the printer with the **Add Printer Wizard**. To access the **Add Printer Wizard**, click **start**, point to **Printers and Other Hardware** , click **Printers and Faxes** and double click the **Add Printer** icon.

External monitor

An external analog monitor can be connected to the external monitor port on the computer.

To connect a monitor, follow the steps below.

1. Turn the computer off.
2. Connect the monitor to the external monitor port.
3. Turn the monitor's power on.
4. Turn the computer on.

When you turn on the power, the computer automatically recognizes the monitor.

To change the display settings, press **Fn + F5**. If you disconnect the monitor before you turn the computer off, be sure to press **Fn + F5** to switch to the internal display. Refer to Chapter 5, *The Keyboard*, for details on using hot keys to change the display setting.

Television

A television can be connected to the video out port on the computer.

To connect a television, follow the steps below.

1. Turn the computer off.
2. Use a video cable (not supplied) to connect the television to the video out port.
3. Turn the television on.
4. Turn the computer on.

You can use the hotkeys **Fn + F5** or use the **TV-Out** button to change the display device. Refer to Chapter 5, *The Keyboard*.

If a television is connected to the computer, set the TV type in Display Properties. Follow the steps below.

For the ATI Chipset

1. Click **start** >**Control Panel** > **Appearance and Themes**.
2. Choose **Display** to open the **Display Properties** dialog box
3. Click the **Settings** tab.
4. Click the **Advanced** button and choose **Displays**
5. Click the **TV** button to open the **TV Properties** dialog box.
6. Adjust the TV properties accordingly.

For the Intel Chipset

1. Click **start** >**Control Panel** > **Appearance and Themes**.
2. Choose **Display** to open the **Display Properties** dialog box.
3. Click **Setting** tab.
4. Click the **Advanced** button and choose **Intel® Graphics Media Accelerator Driver**.
5. Click the **Graphic Properties** button and choose **TV**.
6. Adjusting the TV settings.

i.LINK (IEEE1394)

i.LINK (IEEE1394) is used for high-speed data transfer for a range of compatible devices such as:

- Digital video cameras
- Hard disk drives
- MO drives
- optical disc drives

i.LINK uses a four-pin connector, which does not carry electric current. External devices will need their own power supply.

Precautions

- Make a back-up of your data before transferring it to the computer. There is a possibility that the original data will be damaged. There is a particular risk that some frames will be deleted in the case of digital video transfer.
- Do not transfer data in areas where static electricity is easily generated or in areas subjected to electronic noise. Data can be destroyed.
- If you are transferring data through an IEEE1394 hub, do not connect or disconnect other devices from the hub during data transfer. There is a likelihood that data will be damaged. Connect all devices to the hub before you turn on the computer's power.

Connecting

1. Make sure the connectors are properly aligned and plug the i.LINK (IEEE1394) cable into the computer.
2. Plug the other end of the cable into the device.

Note the following when you use i.LINK:

- You may need to install drivers for your i.LINK devices.
- Not all i.LINK devices have been tested. Therefore, compatibility with all i.LINK devices cannot be guaranteed.
- Use S100, S200 or S400 cables no longer than three meters.
- Some devices might not support standby or automatic off functions.
- Do not connect or disconnect an i.LINK device while it is using an application or when the computer is automatically shutting it down to save power. Data might be destroyed.

Disconnecting

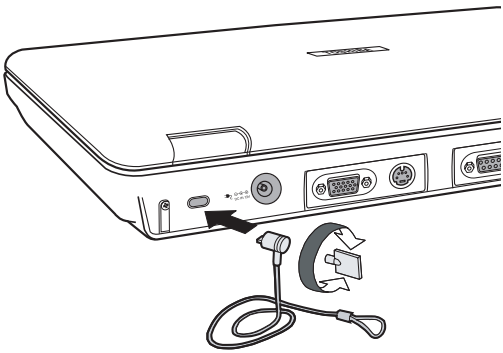
1. Click the **Eject or Remove Hardware** icon on the Task Bar.
2. Point to **i.LINK (IEEE1394) device** and click.
3. Disconnect the cable from the computer then from the i.LINK device.

Refer also to the documentation that came with your i.LINK device.

Security lock

A security lock enables you to anchor your computer to a desk or other heavy object to help prevent unauthorized removal of the computer.

Attach one end of a cable to the desk and the other end to the security lock slot on the right side of the computer.



Security lock

Chapter 9

Troubleshooting

TOSHIBA designed the computer for durability. However, should problems occur, following the procedures in this chapter can help to determine the cause.

All readers should become familiar with this chapter. Knowing what might go wrong can help prevent problems from occurring.

Problem solving process

Resolving problems will be much easier if you observe the following guidelines:

- Stop immediately when you recognize a problem exists. Further action may result in data loss or damage. You may destroy valuable problem-related information that can help solve the problem.
- Observe what is happening. Write down what the system is doing and what actions you performed immediately before the problem occurred. If you have a printer attached, print a copy of the screen using PrtSc.
- Isolate the problem. Using the tools available to you, such as the troubleshooting tips in this chapter, try to discover the specific actions that caused the problem.

The questions and procedures offered in this chapter are meant as a guide, they are not definitive problem solving techniques. Many problems can be solved simply, but a few may require help from your dealer. If you find you need to consult your dealer or others, be prepared to describe the problem in as much detail as possible.

Preliminary checklist

Consider the simplest solution first. The items in this checklist are easy to fix and yet can cause what appears to be a serious problem.

- Make sure you turn on all peripheral devices before you turn on the computer. This includes your printer and any other external device you are using.
- Before you attach an external device, turn the computer off. When you turn the computer back on it recognizes the new device.
- Make sure all options are set properly in the setup program.
- Check all cables. Are they correctly and firmly attached? Loose cables can cause signal errors.
- Inspect all connecting cables for loose wires and all connectors for loose pins.
- Check that the optical disc drive is correctly inserted.

Make notes of your observations and keep them in a permanent error log. This will help you describe your problems to your dealer. If a problem recurs, the log will help you identify the problem faster.

Analyzing the problem

Sometimes the system gives clues that can help you identify why it is malfunctioning. Keep the following questions in mind:

- Which part of the system is not operating properly: keyboard, diskette drives, hard disk drive, printer, display. Each device produces different symptoms.
- Is the operating system configuration set properly? Check the configuration options.
- What appears on the display screen? Does it display any messages or random characters? Print a copy of the screen if you have a printer attached. Look up the messages in the software and operating system documentation. Check that all connecting cables are correctly and firmly attached. Loose cables can cause erroneous or intermittent signals.
- Do any indicators light? Which ones? What colour are they? Do they stay on or blink? Write down what you see.
- Do you hear any beeps? How many? Are they long or short? Are they high pitched or low? Is the computer making any unusual noises? Write down what you hear.

Record your observations so you can describe them to your dealer.

Software	The problems may be caused by your software. If you cannot load a software package, the media may be damaged or the program might be corrupted. Try loading another copy of the software. If an error message appears while you are using a software package, check the software documentation. These documents usually include a problem solving section or a summary of error messages. Next, check any error messages in the OS documentation.
Hardware	If you cannot find a software problem, check your hardware. First run through the items in the preliminary checklist above. If you still cannot correct the problem, try to identify the source. The next section provides checklists for individual components and peripherals.

Hardware and system checklist

This section discusses problems caused by your computer's hardware or attached peripherals. Basic problems may occur in the following areas:

- System start-up
- Self test
- Power
- Overheating power down
- AC Power
- Battery
- Password
- Keyboard
- LCD panel
- Hard disk drive
- Memory cards
- Wireless LAN
- CD-RW/DVD-ROM drive
- Real Time Clock
- PC Card
- Printer
- Monitor
- Sound system
- Pointing device
- USB
- LAN
- Standby/Hibernation
- Memory expansion
- Modem
- i.LINK (IEEE1394)
- DVD Super Multi drive
- Diskette drive

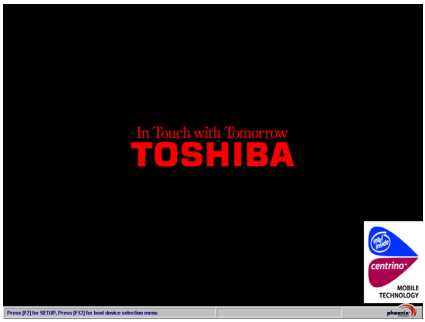
System start-up

When the computer does not start properly, check the following items:

- Self Test
- Power Sources
- Power-on Password

Self test

When the computer starts up, the self test will be run automatically, and the following will be displayed:



(This screen image is one a examples. You may see the different screen image depending on the model you purchased.)

This message remains on the screen for a few seconds.

If the self test is successful, the computer tries to load the operating system.

Depending on how the Boot Priority is set in the computer's BIOS.

If any of the following conditions are present, the self test failed:

- The computer stops and does not proceed to display information or messages except the TOSHIBA logo.
- Random characters appear on the screen, and the system does not function normally.
- The screen displays an error message.

Turn off the computer and check all cable connections as well as PC Card and memory module connections. If the test fails again, contact your dealer.

Power

When the computer is not plugged into an AC outlet, the battery pack is the primary power source. However, your computer has a number of other power resources, including intelligent power supply, Real Time Clock battery. These resources are interrelated and any one could affect apparent power problems. This section provides check lists for AC power and the battery. If you cannot resolve a problem after following them, the cause could lie with another power resource. In such case, contact your dealer.

Overheating power down

If the computer's internal temperature becomes too high, the computer will automatically shut down

AC power

If you have trouble turning on the computer with the AC adapter connected, check the **DC IN** indicator. Refer to Chapter 6, *Power and Power-Up Modes*, for more information.

Problem	Procedure
AC adapter doesn't power the computer (**DC IN** indicator does not glow green).	Check the connections. Make sure the cord is firmly connected to the computer and a power outlet. Check the condition of the cord and terminals. If the cord is frayed or damaged, replace it. If the terminals are soiled, wipe them with cotton or a clean cloth. If the AC adapter still does not power the computer, contact your dealer.

Battery

If you suspect a problem with the battery, check the **DC IN** indicator as well as the indicators for the battery. For information on indicators and battery operation see Chapter 6, *Power and Power-Up Modes*.

Problem	Procedure
Battery doesn't power the computer.	The battery may be discharged. Connect the AC power cord to charge the battery.
Battery doesn't charge when the AC power cord is attached. (**Battery** indicator does not glow amber.)	If the battery is completely discharged, it will not begin charging at once. Wait a few minutes. If the battery still does not charge, make sure the outlet is supplying power. Plug in an appliance and see if it works. If it doesn't, try another power source. Check whether the battery is hot or cold. If the battery is too hot or too cold, it will not charge properly. Let it reach room temperature. Unplug the AC adapter and remove the battery to make sure the terminals are clean. If necessary wipe them with a soft dry cloth dipped in alcohol. Connect the AC adapter and replace the battery. Check the **Battery** indicator. If it does not glow, let the computer charge the battery for at least 20 minutes. If the **Battery** indicator glows after 20 minutes, let the battery continue to charge for at least another 20 minutes before turning on the computer. If the indicator still does not glow, the battery may be at the end of its operating life. Replace it. If you do not think the battery is at the end of its operating life, see your dealer.
Battery doesn't power the computer as long as expected.	Check the power consumption settings in the TOSHIBA Power Saver Utility. Consider using a power saving mode.

Keyboard

Keyboard problems can be caused by your setup configuration. For more information refer to Chapter 5, *The Keyboard*.

Problem	Procedure
Some letter keys produce numbers.	Check that the numeric keypad overlay is not selected. Press **Fn + F10** and try typing again.
Output to screen is garbled.	Make sure the software you are using is not remapping the keyboard. Remapping involves reassigning the meaning of each key. See your software's documentation. If you are still unable to use the keyboard, consult your dealer.

LCD panel

Problem	Procedure
Lines appear broken.	Check if you are in DOS mode. In DOS, lines may appear broken, because of the LCD screen's higher resolution. The Windows display should appear normal.
No display	Press hotkeys **Fn + F5** to change the display priority, to make sure it is not set for an external monitor. Make sure instant security was not activated. Try entering your password, if you have one registered. Or, turn the power off and back on to clear instant security .
Problems above remain unresolved or other problems occur.	Refer to your software's documentation to determine if the software is causing the difficulty. Contact your dealer if the problems continue.

Hard disk drive

Problem	Procedure
Computer does not boot from hard drive.	Insert a system diskette and reboot. There may be a problem with your operating system files. Refer to your OS documentation.
Slow performance	Your files may be fragmented. Run SCANDISK and defragmenter to check the condition of your files and disk. Refer to your OS documentation or online HELP for information on running SCANDISK and the defragmenter. Contact your dealer if the problems continue.

Password

Problem	Procedure
Cannot enter password	Refer to Chapter 6, *Power and Power-Up Modes*.

CD-RW/DVD-ROM drive

For more information, refer to Chapter 4, *Operating Basics*.

Problem	Procedure
You cannot access a disc in the drive	Make sure the drive's drawer is securely. Press gently until it clicks into place. Open the drawer and make sure the disc is properly seated. It should lie flat with the label facing up. A foreign object in the drawer could block laser light from reading the disc. Make sure there is no obstruction. Remove any foreign object. Check whether the disc is dirty. If it is, wipe it with a clean cloth dipped in water or a neutral cleaner. Refer to *Media care* section in Chapter 4 for details on cleaning.
Some discs run correctly, but others do not	The software or hardware configuration may be causing a problem. Make sure the hardware configuration matches your software's needs. Check the disc's documentation. Check the type of disc you are using. The drive supports: DVD-ROM: DVD-ROM, DVD-Video CD-ROM: CD-DA, CD-Text, Photo CD™ (single/multi-session), CD-ROM Mode 1, Mode 2, CD-ROM XA Mode 2 (Form1, Form2), Enhanced CD (CD-EXTRA), CD-G (Audio CD only) Recordable: CD-R, CD-RW, CD Check the region code on the DVD. It must match that on the CD-RW/DVD-ROM drive. Region codes are listed in the *optical disc* section in Chapter 2, *The Grand Tour*.
Cannot write correctly	If you have trouble writing, make sure you are observing the following precautions: ■ Use only media recommended by TOSHIBA. ■ Do not use the mouse or keyboard during writing. ■ Use only the software supplied with the computer for recording. ■ Do not run or start other software during writing. ■ Do not jar the computer during writing. ■ Do not connect/ disconnect external devices or install/remove internal cards during writing. If problems persist, contact your dealer.

DVD Super Multi drive

For more information, refer to Chapter 4, *Operating Basics*.

Problem	Procedure
You cannot access a disc in the drive	Make sure the drive's drawer is securely closed. Press gently until it clicks into place. Open the drawer and make sure the disc is properly seated. It should lie flat with the label facing up. A foreign object in the drawer could block laser light from reading the disc. Make sure there is no obstruction. Remove any foreign object. Check whether the disc is dirty. If it is, wipe it with a clean cloth dipped in water or a neutral cleaner. See the *Media care* section in Chapter 4 for details on cleaning.
Some discs run correctly, but others do not	The software or hardware configuration may be causing a problem. Make sure the hardware configuration matches your software's needs. Check the disc's documentation. Check the type of disc you are using. The drive supports: DVD-ROM: DVD-ROM, DVD-Video, DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM, DVD+R (Double Layer) * DVD+R (Double Layer) is supported by DVD Super Multi drive supporting double layer only CD-ROM: CD-DA, CD-Text, Photo CD (single/multi-session), CD-ROM Mode 1, Mode 2, CD-ROM XA Mode 2 (Form1, Form2), Enhanced CD (CD-EXTRA), CD-G (Audio CD only) Check the region code on the DVD. It must match that on the DVD Super Multi drive.

Problem	Procedure
Cannot write correctly	If you have trouble writing, make sure you are observing the following precautions: ■ Use only media recommended by TOSHIBA. ■ Do not use the mouse or keyboard during writing. ■ Use only the software supplied with the computer for recording. ■ Do not run or start other software during writing. ■ Do not jar the computer during writing. ■ Do not connect/ disconnect external devices or install/remove internal cards during writing. If problems persist, contact your dealer.

Diskette drive

For information on diskette care refer to Chapter 4, *Operating Basics*.

Problem	Procedure
Some programs run correctly, but others do not	The software or hardware configuration may be causing a problem. Make sure the hardware configuration match's your software's needs.
You cannot access the diskette drive probably causing the	Try another disk. If you can access this disk, the original disk (not the disk drive) is problem. If problems persist, contact your dealer.

Infrared port

Refer also to the documentation for your IrDA compatible device and related software.

Problem	Procedure
Infrared devices do not work as expected	Make sure there is no obstruction blocking communication between the computer and the target device. If problems persist, contact your dealer.

PC Card

Refer also to Chapter 8, *Optional Devices*.

Problem	Procedure
PC Card error occurs	Reseat the PC Card to make sure it is firmly connected. Make sure the connection between the external device and the card is firm. Check the card's documentation. If problems persist, contact your dealer.

Memory Card

Refer also to Chapter 8, *Optional Devices*.

Problem	Procedure
Memory card error occurs	Reseat the memory card to make sure it is firmly connected. Check the card's documentation. If problems persist, contact your dealer.

Sound system

Problem	Procedure
No sound is heard	Adjust the volume control dial. Check the software volume settings. Make sure the headphone connection is secure.Check Windows Device Manager. Make sure the sound function is enabled and that settings for I/O address, Interrupt level and DMA are correct for your software and do not conflict with other hardware devices that you have connected to the computer. If problems persist, contact your dealer.

Pointing device

If you are using a USB mouse, also refer to the *USB* section in this chapter and to your mouse documentation.

Touch Pad

Problem	Procedure
On-screen pointer does not respond to Pad operation	The system might be busy. If the pointer is shaped as an hourglass, wait for it to resume its normal shape and try again to move it. You may also press **Fn + F9** to enable the Touch Pad and then try again to move it.
Double-tapping does not work	Try changing the double-click speed setting in the mouse control utility. 1. Open the **Control Panel**, select the **Mouse** icon and press **Enter**. 2. Click the **Buttons** tab. 3. Set the double-click speed as instructed and click **OK**.
The mouse pointer moves too fast or too slow	Try changing the speed setting in the mouse control utility. 1. Open the **Control Panel**, select the **Mouse** icon and press **Enter**. 2. Click the **Pointer Options** tab. 3. Set the speed as instructed and click **OK**. If problems persist, contact your dealer.

USB mouse

Problem	Procedure
On-screen pointer does not respond to Pad operation	The system might be busy. If the pointer is shaped as an hourglass, wait for it to resume its normal shape and try again to move it. Make sure the mouse is properly connected to the USB port.
Double-tapping does not work	Try changing the double-click speed setting in the mouse control utility. 1. Open the **Control Panel**, select the **Mouse** icon and press **Enter**. 2. Click the **Buttons** tab. 3. Set the double-click speed as instructed and click **OK**.

Problem	Procedure
The mouse pointer moves too fast or too slow	Try changing the speed setting in the mouse control utility. 1. Open the **Control Panel**, select the **Mouse** icon and press **Enter**. 2. Click the **Pointer Options** tab. 3. Set the speed as instructed and click **OK**.
The mouse pointer moves erratically	The mouse might be dirty. Refer to your mouse documentations for instructions on cleaning. If problems persist, contact your dealer.

USB

Refer also to your USB device's documentation.

Problem	Procedure
USB device does not work	Check for a firm cable connection between the USB ports on the computer and the USB device. Make sure the USB device drivers are properly installed. Refer to your Windows documentation for information on checking the drivers. If problems persist, contact your dealer.

TV output signal

Problem	Procedure
Display on TV is poor	Make sure the TV type is correct for your area: NTSC (US) or PAL (Europe).
No display	Try adjusting the contrast and brightness controls on the external monitor. Press hotkeys **Fn + F5** to change the display. Refer to Chapter 5, *The Keyboard*. If problems persist, contact your dealer.

If you turn the computer off in Standby mode while the display is on TV, the computer will select either the internal LCD or an external computer CRT as the display device.

Standby/Hibernation

Problem	Procedure
The system will not enter Standby/ Hibernation	Is Windows® Media Player open? The system might not enter Standby/Hibernation, if Windows® Media Player is either playing a selection or finished playing a selection. Close Windows® Media Player before you select Standby/Hibernation. If problems persist, contact your dealer.

Real Time Clock

Problem	Procedure
The following message is Displayed on the LCD: RTC battery is low or CMOS checksum is inconsistent. Press **[F2]** key to set Date/ Time.	The battery for RTC is wearing. Set the date and time in BIOS setup with the following steps: 1. Press **[F1]** key. BIOS setup will boot up. 2. Press **[F2]** to set the date in [System Date]. 3. Press **[F2]** to set the time in [System Time].

Memory expansion

Refer also to Chapter 8, *Optional Devices*, for information on installing memory modules.

Problem	Procedure
The computer hangs up and issues beep sounds. (A long leep, three short beeps, three short beeps, and then a long beep.)	Make sure the memory module installed in the expansion slot is compatible with the computer. If an incompatible module has been installed, follow the steps below. 1. Turn off the power. 2. Disconnect the AC adapter and all periph-eral devices. 3. Remove the battery pack. 4. Remove the memory module. 5. Replace the battery pack and/or connect the AC adapter. 6. Turn on the power. If problems persist, contact your dealer.

Modem

Problem	Procedure
Communication software can't initialize the modem	Make sure the computer's internal modem settings are correct. Refer to Phone and Modem Options Properties in the Control Panel.
You can hear a dial tone but can't make a call	If the call is going through a PBX machine, make sure the communication application's tone dial detection feature is disabled.
You place a call, but a connection can't be made	Make sure the settings are correct in your communications application.
After making a call you can't hear a ring	Make sure the tone or pulse selection in your communications application is set correctly.
Communication is cut off unexpectedly	The computer will automatically cut off communication when connection with the carrier is not successful for a set time interval. Try lengthening this time interval.
A **CONNECT** display is quickly replaced by **NO CARRIER**	Check the error control setting in your communications application.
Character display becomes garbled during a communication	In data transmission, make sure the parity bit and stop bit settings correspond with those of the remote computer. Check the flow control and communication protocol.
You cannot receive an incoming call	Check the “rings before auto answer” setting in your communications application. If problems persist, contact your dealer.

LAN

Problem	Procedure
Cannot access LAN LAN jack and the Wake up on LAN does not work	Check for a firm cable connection between the LAN HUB. Make sure the AC adapter is connected. You cannot access a LAN using the computer's battery power. If problems persist, consult your LAN administrator.

Wireless LAN

If the following procedures do not restore LAN access, consult your LAN administrator. For more information on wireless communication, refer to Chapter 4, *Operating Basics*.

Problem	Procedure
Cannot access Wireless LAN	Make sure the computer's wireless communication switch is set to on. Use the Config Free program that comes pre-installed in your computer to see LAN status. If problems persist, consult your LAN administrator.

Monitor

Refer also to Chapter 8, *Optional Devices*, and to your monitor's documentation.

Problem	Procedure
Monitor does not turn on	Make sure that the external monitor's power switch is on. Confirm that the external monitor's power cable is plugged into a working power outlet.
No display	Try adjusting the contrast and brightness controls on the external monitor. Press hotkeys **Fn + F5** to change the display priority and make sure it is not set for the internal display.
Display error occurs	Check that the cable connecting the external monitor to the computer is attached firmly. If problems persist, contact your dealer.
Monitor goes into panning mode	Check your monitor specification. It might not support selected resolution and refresh rate. The resolution on monitor might go into panning mode when wide screen resolution is selected. Refer to Appendix B, *Display Modes*.

i.LINK (IEEE1394)

Problem	Procedure
i.LINK device does not function	Make sure the cable is securely connected to the computer and to the device. Make sure the device's power is turned on. Reinstall the drivers. Open the Windows Control Panel and double-click the **Add New Hardware** icon. Follow the on-screen directions. Restart Windows. If problems persist, contact your dealer.

TOSHIBA support

If you require any additional help using your computer or if you are having problems operating the computer, you may need to contact TOSHIBA for additional technical assistance.

Before you call

Some problems you experience may be related to software or the operating system, it is important to investigate other sources of assistance first. Before contacting TOSHIBA, try the following:

- Review troubleshooting sections in the documentation for software and peripheral devices.
- If a problem occurs when you are running software applications, consult the software documentation for troubleshooting suggestions. Call the software company's technical support for assistance.
- Consult the dealer you purchased your computer and/or software from. They are your best sources for current information and support.

Where to write

If you are still unable to solve the problem and suspect that it is hardware related, write to TOSHIBA at the location listed in the accompanying warranty booklet or visit www.toshiba-europe.com on the Internet.

Appendix A

Specifications

This appendix summarizes the computer's technical specifications.

Dimensions

365mm x 274.8mm x 29.03mm (Front)/37.3mm (Rear)

Weight

3.1kg/6.83lbs

Dimensions and weight may vary with various configurations.
Above dimensions and weights are measured at a specific criteria.
They are not guaranteed as the maximum dimensions and weight of the actual product.

Environmental Requirements

Conditions	Ambient temperature	Relative humidity
Operating	5°C to 35°C	20% to 80%
Non-operating	-20°C to 65°C	
Conditions	Altitude (from sea level)	
Operating	sea level to 10,000 feet	
Non-operating	sea level to 40,000 feet	

Built-in Modem

Network control unit (NCU)		
Type of NCU	AA	
Type of line	Telephone line (analog only)	
Type of dialing	Pulse Tone	
Control command	AT commands EIA-578 commands	
Monitor function	Computer's speaker	
Communication specifications		
Communication System	Data: Fax:	Full duplex Half duplex
Communication Protocol	Data: ITU-T-Rec (Former CCITT) Bell Fax: ITU-T-Rec (Former CCITT)	 V.21/V.22/V.22bis/V.32/ V.32bis/V.34/V.90/ V.92(only for USA and Canada) 103/212A V.17/V.29/V.27ter /V.21 ch2
Communication Speed	Data transmission and reception 300/1200/2400/4800/7200/9600/12000/14400/ 16800/19200/21600/24000/26400/28800/31200/ 33600 bps Data reception only with V.90/V.92 28000/29333/30666/32000/33333/34666/36000/ 37333/38666/40000/41333/42666/44000/45333/ 46666/48000/49333/50666/52000/53333/54666/ 56000 bps Fax 2400/4800/7200/9600/12000/14400 bps	
Error correcting	MNP class 4 and ITU-T V.42	
Data compression	MNP class 5 and ITU-T V.42bis	

Appendix B

Display Modes

This appendix contains a table listing all the display modes when the display is set to an external monitor.

CRT Display Resolution	Colour Depth (bpp)	Refresh Rate (Hz)
800 x 600	16 bpp	60, 75, 85, 100
	32 bpp	60, 75, 85, 100
1024 x 768	16 bpp	60, 75, 85, 100
	32 bpp	60, 75, 85, 100
1280 x 1024	16 bpp	60, 75, 85, 100
	32 bpp	60, 75, 85, 100
1600 x 1200	16 bpp	60, 75, 85, 100
	32 bpp	60, 75, 85, 100
1920 x 1440	16 bpp	60, 75
	32 bpp	60, 75
2048 x 1536	16 bpp	60
	32 bpp	60

Displaying movies on a TV or CRT

This section describes how to set up your system to display movies simultaneously on your computer's LCD and on an external TV or CRT monitor.

Follow the steps below.

For ATI Chipset

1. Click **start** > **Control Panel** and click **Appearance and Themes**.
2. Click **Display** .
3. Select the **Settings** tab and click **Advanced**.
4. Click the **Displays** tab.
5. Select the external display device you wish to use. It must be connected to the computer in order to be selected.
6. In the resulting properties box, if any additional options are available for your particular device, set then to your liking.
7. Finally, click the **ATI Overlay** tab to adjust the video overlay properties.

For Intel Chipset

1. Click **start** >**Control Panel** > **Appearance and Themes**.
2. Choose **Display** to open the **Display Properties** dialog box.
3. Click the **Setting tab**.
4. Click the **Advanced** button and choose **Intel® Graphics Media Accelerator Driver**.
5. Click the **Graphic Properties** button and choose **TV**.
6. Adjusting the TV settings.

Appendix C

AC Power Cord and Connectors

The power cord's AC input plug must be compatible with the various international AC power outlets and the cord must meet the standards for the country/region in which it is used. All cords must meet the following specifications:

Length:	Minimum 2 meters
Wire size:	Minimum 0.75 mm^2
Current rating:	Minimum 2.5 amperes
Voltage rating:	125 or 250 VAC (depending on country/region's power standards)

Certification agencies

U.S. and Canada:	UL listed and CSA certified No. 18 AWG, Type SVT or SPT-2
Australia:	AS
Japan:	DENANHO

Europe:

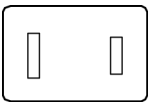
Austria:	OVE	**Italy:**	IMQ
Belgium:	CEBEC	**The Netherlands:**	KEMA
Denmark:	DEMKO	**Norway:**	KEMKO
Finland:	FIMKO	**Sweden:**	SEMKO
France:	LCIE	**Switzerland:**	SEV
Germany:	VDE	**United Kingdom:**	BSI

In Europe, two conductors power cord must be VDE type, H05VVH2-F or H03VVH2-F and for three conductors power cord must be VDE type, H05VV-F.

For the United States and Canada, two pin plug configuration must be a 2-15P (250V) or 1-15P (125V) and three pin plug coniguration must be 6-15P (250V) or 5-15P (125V) as designated in the U. S. National Electrical code handbook and the Canadian Electrical Code Part II.

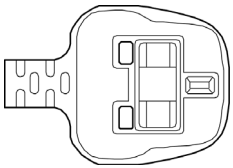
The following illustrations show the plug shapes for the U. S. A. and Canada, the United Kingdom, Australia and Europe.

USA



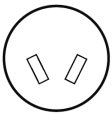
UL approved

United Kingdom



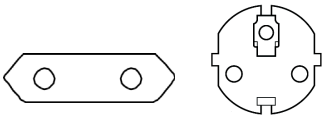
BS approved

Australia



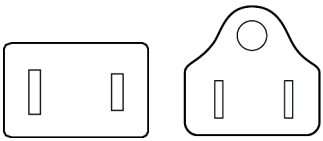
AS approved

Europe



Approved by the appropriate agency

Canada



CSA approved

Appendix D

If your computer is stolen

Always take care of your computer and try to prevent it from being stolen. You are the owner of a valuable technical device, which may be highly attractive to thieves, so please do not leave it unattended in a public place. To further help protect against theft, security cables can be bought for use with your notebook when it is being used at home or in the office.

Make a note of your computer's machine type, model number, and serial number, and put it in a safe place. You will find this information on the underside of your notebook. Please also keep the receipt of the computer you purchased.

Should your computer be stolen, however, we'll help you try to find it. Before contacting TOSHIBA, please prepare the following information which is necessary to uniquely identify your computer:

- In which country was your computer stolen?
- What type of machine do you have?
- What was the model number (PA number)?
- What was the serial number (8 digits)?
- When was it stolen, i.e. date?
- What is your address, phone, and fax number?

To register the theft on paper, please follow these procedures:

- Fill in the TOSHIBA Theft Registration form (or a copy of it) below.
- Attach a copy of your receipt showing where your computer was purchased.
- Either fax or send the receipt and registration form to the address below.

To register the theft online, please follow these procedures:

- Visit www.toshiba-europe.com on the Internet. In the product area, choose **Computer Systems**.
- In the Computer Systems page, open the **Support & Downloads** menu and choose the **Stolen Units Database** option.

Your entries are used to track your computer at our service points.

TOSHIBA Theft Registration

Send to: TOSHIBA Europe GmbH
Technical Service and Support
Leibnizstr. 2
93055 Regensburg
Germany

Fax number: +49 (0) 941 7807 921

Country stolen:	
Machine type: (e.g. TOSHIBA M40X)	
Model number: (e.g. PSA50 YXT)	
Serial number: (e.g. 12345678G)	
Date stolen:	Year Month Day

Owner's details

Last name, first name:	
Company:	
Street:	
Postal Code/City:	
Country:	
Phone:	
Fax:	

Glossary

The terms in this glossary cover topics related to this manual. Alternate naming is included for reference.

Abbreviations

AC: alternating current
AGP: accelerated graphics port
ASCII: American Standard Code for Information Interchange
BIOS: basic input output system
CD-ROM: Compact Disc-Read Only Memory
CD-RW: Compact Disc-Read/Write
CMOS: complementary metal-oxide semiconductor
CPU: central processing unit
CRT: cathode ray tube
DC: direct current
DDC: display data channel
DMA: direct memory access
DOS: disk operating system
DVD: digital versatile disc
ECP: extended capabilities port
FDD: floppy disk drive
FIR: fast infrared
HDD: hard disk drive
IDE: integrated drive electronics
I/O: input/output
***IrDA*:** Infrared Data Association
IRQ: interrupt request
KB: kilobyte
LCD: liquid crystal display
LED: light emitting diode
LSI: large scale integration
MS-DOS: Microsoft Disk Operating System
PCI: peripheral component interconnect
RAM: random access memory

ROM: read only memory

RTC: real time clock

SCSI: small computer system interface

TFT: thin-film transistor

USB: Universal Serial Bus

VESA: Video Electronic Standards Association

VGA: video graphics array

***XGA*:** extended graphics array

A

adaptor: A device that provides an interface between two dissimilar electronic devices. For example, the AC adaptor modifies the power from a wall outlet for use by the computer. This term also refers to the add-in circuit cards that control external devices, such as video monitors and magnetic tape devices.

application: A group of programs that together are used for a specific task such as accounting, financial planning, spreadsheets, word processing and games.

ASCII: American Standard Code for Information Interchange. ASCII code is a set of 256 binary codes that represent the most commonly used letters, numbers, and symbols.

B

BIOS: Basic Input Output System. The firmware that controls data flow within the computer. *See also* firmware.

bit: Derived from "binary digit," the basic unit of information used by the computer. It is either zero or one. Eight bits is one byte. *See also* byte.

boot: Short for bootstrap. A program that starts or restarts the computer. The program reads instructions from a storage device into the computer's memory.

bps: Bits per second. Typically used to describe the data transmission speed of a modem.

buffer: The portion of the computer's memory where data is temporarily stored. Buffers often compensate for differences in the rate of flow from one device to another.

bus: An interface for transmission of signals, data or electric power.

byte: The representation of a single character. A sequence of eight bits treated as a single unit; also the smallest addressable unit within the system.

C

cache memory: High speed memory which stores data that increases processor speed and data transfer rate. When the CPU reads data from main memory, it stores a copy of this data in cache memory. The next time the CPU needs that same data, it looks for it in the cache memory rather than the main memory, which saves time. The computer has two cache levels. Level one is incorporated into the processor and level two resides in external memory.

capacity: The amount of data that can be stored on a magnetic storage device such as a floppy disk or hard disk. It is usually described in terms of kilobytes (KB), where one KB = 1024 bytes and megabytes (MB), where one MB = 1024 KB.

CardBus: An industry standard bus for 32-bit PC cards.

CD-ROM: A Compact Disc-Read Only Memory is a high capacity disc that can be read from but not written to. The CD-ROM drive uses a laser, rather than magnetic heads, to read data from the disc.

CD-R: A Compact Disc-Recordable disc can be written once and read many times. See also CD-ROM.

CD-RW: A Compact Disc-Read/Write disc can be rewritten many times. *See* also CD-ROM.

character: Any letter, number, punctuation mark, or symbol used by the computer. Also synonymous with byte.

chip: A small semiconductor containing computer logic and circuitry for processing, memory, input/output functions and controlling other chips.

CMOS: Complementary Metal-Oxide Semiconductor. An electronic circuit fabricated on a silicon wafer that requires very little power. Integrated circuits implemented in CMOS technology can be tightly packaged and are highly reliable.

compatibility: 1) The ability of one computer to accept and process data in the same manner as another computer without modifying the data or the media upon which it is being transferred.
2) the ability of one device to connect to or communicate with another system or component.

components: Elements or parts (of a system) which make up the whole (system).

configuration: The specific components in your system (such as the terminal, printer, and disk drives) and the settings that define how your system works. You use the HW Setup program to control your system configuration.

control keys: A key or sequence of keys you enter from the keyboard to initiate a particular function within a program.

controller: Built-in hardware and software that controls the functions of a specific internal or peripheral device (e.g. keyboard controller).

CPU: Central Processing Unit. The portion of the computer that interprets and executes instructions.

CRT: Cathode Ray Tube. A vacuum tube in which beams projected on a fluorescent screen-producing luminous spots. An example is the television set.

cursor: A small, blinking rectangle or line that indicates the current position on the display screen.

D

DC: Direct Current. Electric current that flows in one direction. This type of power is usually supplied by batteries.

default: The parameter value automatically selected by the system when you or the program do not provide instructions. Also called a preset value.

device driver: A program that controls communication between a specific peripheral device and the computer. The CONFIG.SYS file contains device drivers that MS-DOS loads when you turn the computer on.

dialog box: A window that accepts user input to make system settings or record other information.

disk drive: The device that randomly accesses information on a disk and copies it to the computer's memory. It also writes data from memory to the disk. To accomplish these tasks, the unit physically rotates the disk at high speed past a read-write head.

display: A CRT, LCD, or other image producing device used to view computer output.

DOS: Disk Operating System. *See* operating system.

driver: A software program, generally part of the operating system, that controls a specific piece of hardware (frequently a peripheral device such as a printer or mouse).

DVD-RAM: A Digital Versatile Disc Random Access Memory is a high-capacity, high performance disc that lets you store large volumes of data. The DVD-ROM drive uses a laser to read data from the disc.

DVD-ROM: A Digital Versatile Disc Read Only Memory is a high capacity, high performance disc suitable for play back of video and other high-density files. The DVD-ROM drive uses a laser to read data from the disc.

E

execute: To interpret and execute an instruction.

F

fast infrared: An industry standard that enables cableless infrared serial data transfer at speeds of up to 4 Mbps.

floppy disk: A removable disk that stores magnetically encoded data.

floppy disk drive (FDD): An electromechanical device that reads and writes to floppy disks.

folder: An icon in Windows used to store documents or other folders.

format: The process of readying a blank disk for its first use. Formatting establishes the structure of the disk that the operating system expects before it writes files or programs onto the disk.

function keys: The keys labeled **F1** through **F12** that tell the computer to perform certain functions.

G

gigabyte (GB): A unit of data storage equal to 1024 megabytes. *See also* megabyte.

graphics: Drawings, pictures, or other images, such as charts or graphs, to present information.

H

hard disk: A non-removable disk usually referred to as drive C. The factory installs this disk and only a trained engineer can remove it for servicing. Also called fixed disk.

hard disk drive (HDD): An electromechanical device that reads and writes a hard disk. *See also* hard disk.

hertz: A unit of wave frequency that equals one cycle per second.

hot key: The computer's feature in which certain keys in combination with the extended function key, **Fn**, can be used to set system parameters, such as speaker volume.

I

i.LINK (IEEE1394): This port enables high-speed data transfer directly from external devices such as digital video cameras.

input: The data or instructions you provide to a computer, communication device or other peripheral device from the keyboard or external or internal storage devices. The data sent (or output) by the sending computer is input for the receiving computer.

interface: 1) Hardware and/or software components of a system used specifically to connect one system or device to another.
2) To physically connect one system or device to another to exchange information.
3) The point of contact between user, the computer, and the program, for example, the keyboard or a menu.

I/O: Input/output. Refers to acceptance and transfer of data to and from a computer.

I/O devices: Equipment used to communicate with the computer and transfer data to and from it.

IrDA 1.1: An industry standard that enables cableless infrared serial data transfer at speeds of up to 4 Mbps.

J

jumper: A small clip or wire that allows you to change the hardware characteristics by electrically connecting two points of a circuit.

K

K: Taken from the Greek word kilo, meaning 1000; often used as equivalent to 1024, or 2 raised to the 10th power. *See also* byte and kilobyte.

KB: *See* kilobyte.

L

Light Emitting Diode (LED): A semiconductor device that emits light when a current is applied.

Liquid Crystal Display (LCD): Liquid crystal sealed between two sheets of glass coated with transparent conducting material. The viewing-side coating is etched into character forming segments with leads that extend to the edge of the glass. Applying a voltage between the glass sheets alters the brightness of the liquid crystal.

LSI: Large Scale Integration.
1) A technology that allows the inclusion of up to 100,000 simple logic gates on a single chip.
2) An integrated circuit that uses large scale integration.

M

megabyte (MB): A unit of data storage equal to 1024 kilobytes. *See also* kilobyte.

mode: A method of operation, for example, the boot mode, standby mode or the hibernation mode.

modem: Derived from modulator/demodulator, a device that converts (modulates) digital data for transmission over telephone lines and then converts modulated data (demodulates) to digital format where received.

monitor: A device that uses rows and columns of pixels to display alphanumeric characters or graphic images. *See also* CRT.

MP3: An audio compression standard that enables high-quality transmission and real-time playback of sound files.

N

numeric keypad overlay: A feature that allows you to use certain keys on the keyboard to perform numeric entry, or to control cursor and page movement.

O

operating system: A group of programs that controls the basic operation of a computer. Operating system functions include interpreting programs, creating data files, and controlling the transmission and receipt (input/output) of data to and from memory and peripheral devices.

output: The results of a computer operation. Output commonly indicates data.
1) printed on paper, 2) displayed at a terminal, 3) sent through the serial port of internal modem, or 4) stored on some magnetic media.

P

parity: 1) The symmetrical relationship between two parameter values (integers) both of which are either on or off; odd or even; 0 or 1.
2) In serial communications, an error detection bit that is added to a group of data bits making the sum of the bits even or odd. Parity can be set to none, odd, or even.

peripheral device: An I/O device that is external to the central processor and/or main memory such as a printer or a mouse.

pixel: A picture element. The smallest dot that can be made on a display or printer. Also called a pel.

plug and play: A capability with Windows that enables the system to automatically recognize connections of external devices and make the necessary configurations in the computer.

port: The electrical connection through which the computer sends and receives data to and from devices or other computers.

prompt: A message the computer provides indicating it is ready for or requires information or an action from you.

R

Random Access Memory (RAM): High speed memory within the computer circuitry that can be read or written to.

restart: Resetting a computer without turning it off (also called “warm boot” or “soft reset”). *See also* boot.

RJ11: A modular telephone jack.

RJ45: A modular LAN jack.

ROM: Read Only Memory: A nonvolatile memory chip manufactured to contain information that controls the computer's basic operation. You cannot access or change information stored in ROM.

S

SCSI: Small Computer System Interface is an industry standard interface for connection of a variety of peripheral devices.

soft key: Key combinations that emulate keys on the IBM keyboard, change some configuration options, stop program execution, and access the numeric keypad overlay.

stop bit: One or more bits of a byte that follow the transmitted character or group codes in asynchronous serial communications.

system disk: A disk that has been formatted with an operating system. For MS-DOS the operating system is contained in two hidden files and the COMMAND.COM file. You can boot a computer using a system disk. Also called an operating system disk.

T

terminal: A typewriter-like keyboard and CRT display screen connected to the computer for data input/output.

TFT display: A liquid crystal display (LCD) made from an array of liquid crystal cells using active-matrix technology with thin film transistor (TFT) to drive each cell.

Touch Pad: A pointing device integrated into the TOSHIBA computer palm rest.

U

Universal Serial Bus: This serial interface lets you communicate with several devices connected in a chain to a single port on the computer.

V

VGA: Video Graphics Array is an industry standard video adaptor that lets you run any popular software.

W

warm start: Restarting or resetting a computer without turning it off.

write protection: A method for protecting a floppy disk from accidental erasure.